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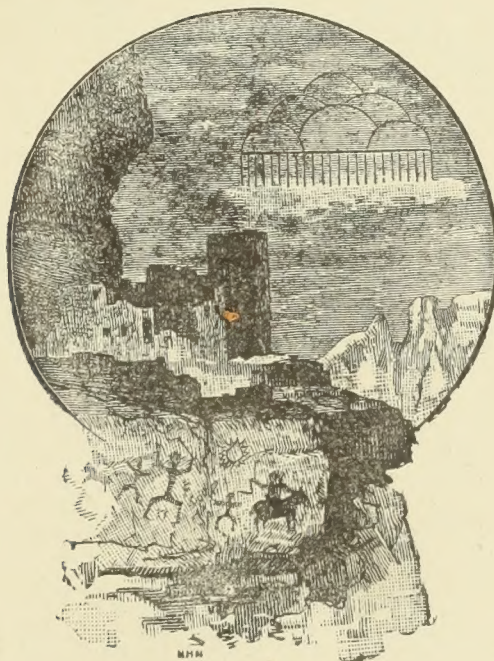
SEVENTEENTH ANNUAL REPORT
OF THE
BUREAU OF AMERICAN ETHNOLOGY

TO THE
SECRETARY OF THE SMITHSONIAN INSTITUTION

1895-96

BY
J. W. POWELL
DIRECTOR

IN TWO PARTS—PART 1



WASHINGTON
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1898

LETTER OF TRANSMITTAL

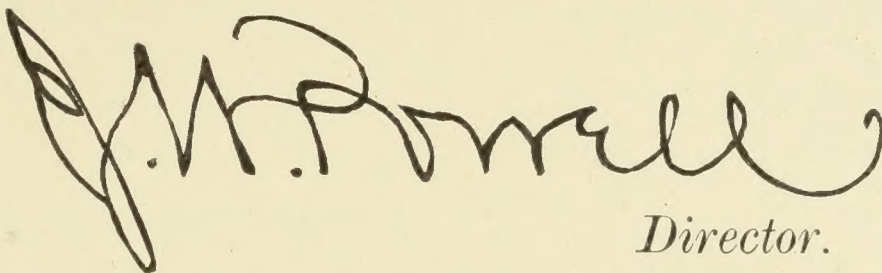
SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, D. C., July 1, 1896.

SIR: I have the honor to submit my Seventeenth Annual Report as Director of the Bureau of American Ethnology.

The preliminary portion comprises an exposition of the operations of the Bureau during the fiscal year; the remainder consists of a series of memoirs on anthropologic subjects, prepared by assistants, which illustrate the methods and results of the work of the Bureau.

Allow me to express my appreciation of your constant aid and your wise counsel relating to the work under my charge.

I am, with respect, your obedient servant,

A handwritten signature in dark ink, appearing to read "J. W. Powell", with a large, sweeping flourish at the end.

Director.

Honorable S. P. LANGLEY,
Secretary of the Smithsonian Institution.

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REPORT OF THE DIRECTOR

SEVENTEENTH ANNUAL REPORT
OF THE
BUREAU OF AMERICAN ETHNOLOGY

By J. W. POWELL, Director

INTRODUCTION

Ethnologic researches have been carried forward throughout the fiscal year ending June 30, 1896, in accordance with the act of Congress making provision "for continuing ethnological researches among the American Indians, under the direction of the Smithsonian Institution," approved March 2, 1895.

The purpose of ethnologic research is the discovery of relations among tribes and peoples. The relations sought may be either structural or activital. Ethnologic inquiry began many years ago. Throughout the civilized world men of research had engaged in the study of tribal man. Their inquiries were directed mainly toward the discovery of physical characteristics, and toward the definition of races in terms of such characteristics. Much work of this kind was done, and a great body of useful data pertaining to tribal men was accumulated. When this Bureau was instituted in 1879, the primary purpose contemplated by statesmen was the practical definition of tribes in such terms as to guide officials engaged in grouping the Indians on reservations; and the experience gained through the inquiry soon demonstrated that the relations of practical moment are not physical but demotic. Thus immediate practical needs forced inquiry toward relations transcending those discovered among beasts by biologists, and led to a study of the essentially human activities.

As research progressed under this practical impetus, the lines of human conduct leading toward amity or tending toward enmity among the tribesmen were necessarily studied with especial care. It was soon observed that diversities in mythology or belief easily engender distrust and strife, while similarities in faith inspire mutual confidence and thus promote peace. Accordingly the fiducial activities of the tribes, including the myths and ceremonies, were investigated and defined. It was also observed that tribes and confederacies organized or regimented on parallel lines and governed by chiefs chosen in the same way commonly associate peacefully, while groups whose institutions are unlike seldom associate without friction and clashing. Thus the practical importance of primitive institutions was necessarily recognized. It was observed, too, that aboriginal groups whose industries, sports, and games are similar usually live together in harmony, while Indians whose arts and industries are diverse are mutually suspicious and prone to animosity; so that it was deemed needful to investigate and discriminate the esthetic and industrial activities of the several tribes. Finally it was observed that the arts of pleasure, the industries, the institutions, and the beliefs of the tribes are intimately connected with the languages by which they are expressed and continually revived, and, as observation proceeded, this connection was found so intimate as to show that language may be regarded as an index to all the other activital attributes, and hence as a basis for tribal classification and for the arrangement of the Indians in amicable groups.

As the researches went on from year to year, the early observations were extended and the early generalizations corroborated, and a system of classification based on essentially human activities was developed and applied. This system is set forth in the preceding reports and is expressed in the several lines of research pursued in the Bureau.

With the definition of the activities, ethnic research gradually rose to a new plane. The investigator of today feels less concern in the physical characteristics of tribesmen than in their conduct and in the motives and other intrinsic attributes

expressed by conduct; and he finds that just classification of the activities of peoples removes the need for other classifications of men, at least in so far as civil conditions are concerned. With the concentration of study on the human activities, they gradually came to be recognized as at once the expressions and the products of human intelligence. Considerable thought has been given to the mode of development of the activital products and of the activities themselves; and the researches in this direction are yielding results worthy of record.

1. The esthetic instinct is strongly developed among the American aborigines, especially in childhood and early adolescence; and even in maturity and old age it is abundantly manifested in ceremonial dances, in oral and instrumental music, in symbolic decoration, in divinatory games, and in other ways. Now, the researches indicate (1) that play springs spontaneously in the individual as the expression of hereditary function, normally strengthened by exercise in each generation so as to pass on in increasing potency as the generations run; (2) that the play of the individual normally epitomizes the serious as well as the lighter ancestral activities, and presages both the serious and the lighter activities of the individual in later life and of his descendants in later generations; (3) that through this inherent relation the spontaneous activities are gradually directed, during the life of the individual and during the succession of generations, to more serious ends; (4) that, in this way, industries spring perpetually from pleasures; and (5) that the pleasures constantly spread from individual to individual and from group to group through mimicry and other manifestations of the social instinct. Accordingly, while the esthetic activities tend to increase and multiply through individual initiative, they are extended and perpetuated only through interchange and heritage; so that, despite a minor differential tendency, the general trend of esthetic development is toward combination and integration.

Pleasure and industry are concomitant and connate. Both motives appear not only in the human race, but even among the lower animals. Pleasure and life are ends which men seek and have sought from primordial time, but pleasure is

the cradle in which industry is rocked, for the earliest pleasures of mankind are mimetic industries.

2. Although less perfect than in higher culture, the industrial instinct of the American aborigines is developed to a suggestive degree. Observably springing from the desire for sustenance and the need for protection from unfriendly environment, the industries of the tribesmen, as the researches among them indicate, are developed through the regulation or control of spontaneous activities. The impulse toward regulation arises in various ways. Doubtless the initial impulse is physiologic, and hence pertains to the individual rather than the group; but the observably effective impulses are predominantly mimetic and subordinately rational, and in either case are essentially collective. Throughout primitive industry, mimicry plays a leading rôle; the activities of food-getting are learned by example, not merely the example of human food-getters but that of beasts deified in recognition of their strength and swiftness and ferocity. Teeth, claws, horns, spines, and shells are chosen as implements by reason of a mythic magnification of their efficiency in offense and defense, and wholly artificial implements and weapons are fabricated in imitation of the animal structures, in the faith that they are thereby endowed with superphysical potency. As the amicable workers multiply their devices are interchanged, with the effect that the more efficient are retained and the less efficient abandoned. Even when the workers are inimical some interchange goes on under the process of acculturation, for the leading motive of strife in savagery and barbarism is the conquest of deities symbolized by the devices of warfare. With the growth of faculty example is integrated and experience coordinated and mysticism measurably eliminated, so that industrial activity is regulated by rational arrangement of realities—and thus invention begins; but invention arises with exceeding slowness among lower men, and remains dominated by primitive imitation until the higher culture-stages are attained. The factors involved in regulating spontaneous impulses and directing them toward individual and collective welfare appear to be (1) heritage, (2) environmental interaction, (3) imitation,

(4) coordination of experience of self and others, and (5) invention. It would be difficult to evaluate these several factors fairly; but when they are so grouped as to oppose the individual and the collective, or more properly (*a*) the independent and (*b*) the imitative, it is not difficult to judge their relative importance; for, especially in that lower culture in which invention is subordinate, the imitative element is so largely predominant that the independent element is commonly relegated to the limbo of paradox—as when curiosity-seekers puzzle over activital coincidences or interpret them as evidences of former contact between unrelated peoples. In general terms, it would seem that, while the industrial activities tend to increase and multiply through individual initiative (though in much less degree than the esthetic activities), they are extended and perpetuated partly through heritage but chiefly through imitative interchange; so that the essential trend of industrial development is toward integration and coordination.

3. The institutional activities of the American Indians have been found peculiarly instructive. The relationships which arise from the physical conditions of reproduction of children from parents is seized upon as an obvious method for organizing the groups of society in a hierarchy. The tribes that live in the lowest stage of culture (which we call savagery) recognize parents and children, but they practically give to the mother superior authority over the children. The next higher group is the clan; this is organized so as to include a peculiar set of persons. The mother and her brothers and sisters together with the grandmother with her brothers and sisters constitute the group, which may also include the great-grandmother and her brothers and sisters. The group is thus projected into antiquity, so that all persons who recognize kinship by an unbroken descent through mothers are included therein, and future generations have their clan organization fixed thereby. The chief or ruler of the group is always the elder man of the group; the chieftaincy is therefore avuncular.

In the family, authority is in the elder, and if two or more generations constitute the same household, the authority is still in the elder, but the mother has authority over the father. In

the clan the uncle or mother's brother has chief authority, and superior age always gives authority in savagery. This is the theory upon which the savage proceeds; but superior age is conventional age, and men may be advanced from number to number in age; a younger son may be advanced over an elder son, and when this occurs they exchange kinship names; a nephew may be promoted over his uncle, when they also exchange kinship names.

In addition to the family and the clan a still higher group is organized. All persons who claim relationship by consanguinity are included in this group; this is the tribe. Marriage is forbidden within the clan; it is, therefore, an incest group; but men and women of different clans mate, and thus marriage is within the tribe. If a person not a member of the tribe wishes to marry a person within the tribe, he must be adopted into some clan other than that of his mate, and if a person wishes to marry within the clan, he must be adopted into some other clan; so that incest in this stage of society is prohibited marriage within a conventional group of persons, and is thus based on convention and not on degree of consanguinity. Again, while the mother's brothers and sisters belong to her clan, the children of the brothers belong to the clan in which they are married. The children of the sisters of the clan call one another brothers and sisters, but the children of the brothers call the children of the sisters by a term which may be rendered by the English term cousin.

Tribes are also organized into confederacies. Such organizations seem always to result from war, but when peace is established a convention is made, and the contracting parties assume artificial relationship. They may be brothers, in which case they are elder brothers and younger brothers. They may, by convention, be fathers and sons, or even grandfathers and grandsons, or uncles and nephews, the conquering party taking the name which implies superior age. But several tribes may be organized into a confederacy; then kinship terms are parceled out among them in compliance with previously arranged conventional kinship.

In all the American tribes of savagery we find that peculiar

groups of persons are organized. We call these groups shamanistic societies; they are organized as religious bodies, but the term must be used with an extended meaning so as to include the ceremonies which savage men believe to be religious. Pleasure and pain, welfare and want, peace and warfare, health and disease, and all good and evil are believed by the savage men to be under the control of these shamanistic societies. Such religious bodies (if the term is permitted) play a very important part in savage society; they are known as brotherhoods, and the chief of the brotherhood is called their father, and the members of the brotherhood call one another brothers and sisters. Thus even their societies are planned on kinship ideas.

Some of the tribes of America are organized on a somewhat different plan which may be set forth. When they are organized on this new plan we call them barbarians, and thus distinguish them from tribes that are organized on the clanship system. First, the father becomes the head of the family and authority is in the father rather than in the mother. Second, for the group which is called the clan in savagery there is substituted the gens in barbarism; this group embraces all of those persons who reckon kinship through fathers, so that the father and his brothers and sisters, together with the grandfather and his brothers and sisters, and all other consanguineal kindred back in past generations and forward in future generations are called a gens. Children of the same father only are called brothers and sisters, but the children of his brothers are designated by his children in terms which may be translated cousin; then cousins who are children of the father's brothers and sisters, and also those who are children of the mother's brothers and sisters, are called by terms which are often translated into English as coming under the designation cousin, though in barbarism a distinction is made, cousins through the father and cousins through the mother having different designations. Thus there are two terms which signify cousins; and these cousins are further classed by age relative to the person speaking. The gens appears in Greek and Roman history, where it is known as the agnatic kindred. The tribe remains a

their speech is held to be the token of an arcanum whence the word derives mystical powers; their ultimate opinions cluster about a zoic pantheon. Most of the tribes instinctively or deliberately withhold their abounding faith and conceal their fiducial observances from unsympathetic aliens, sometimes with such success that their very existence is doubted; yet expert inquiry indicates that all the tribesmen are devotees of fiducial systems, closely corresponding among each other and also with those of the primitive peoples of other continents. The earlier researches served to throw light on the stages of philosophic development among the American aborigines and other peoples. The first stage is that of diffused mysticism, in which the crude thinker conceives himself surrounded by inscrutable potencies of capricious character, commonly maleficent save when controlled by rites. In savagery there is observed a growing tendency to withdraw mystical attributes from things that are not conspicuous or do not play an apparent part in the affairs of life, and to concentrate such attributes in the great animals of the world, so that this stage has been called zootheism. In the second stage the mystery is withdrawn from conquerable animals and from things of innocuous motion and sound, and is concentrated either in physical manifestations like wind, storm, thunder, and lightning, or in the greater nature-objects like the sun, moon, and ocean, and the powers or objects are invested with supernatural attributes and assigned to the higher places of the pantheon.

Now, the sophic activities, unlike those of lower order, are essentially intellectual, and grow out of the integration of the primary activities, which are reshaped in turn through exercise of the higher function; yet in these activities, as in those of lower order, there are two antithetic developmental elements, (*a*) individual initiative, and (*b*) collective assimilation. Doubtless the individual element predominates in range of activity, since the normal brain spontaneously produces concepts unceasingly; yet only a few of these products go beyond the producer, only a few of these are assimilated by others, and only a few of those assimilated remain permanently in the great

body of thought which the peoples of the world are engaged in building; so that the finally effective element in sophic development is that of assimilation. True, each discrete human group, howsoever small, develops a certain capacity, and accumulates and systemizes a certain body of experience, which reflects customary activities, themselves shaped by environment; but the processes are no less collective in the smaller group than in the larger. The researches among the aborigines reveal an insatiable hunger for thought-material; when the hunter uses implements of tooth and claw, he studies the animals to learn the most effective modes of use and imputes to his zoic teachers powers created in his own imagination; when warriors engage in battle, each strives for the mysterious potencies assumed to imbue the weapons and standards of the enemy; when shaman meets shaman, each strives to excel in thaumaturgic essay, yet each seeks still more fervidly to master the mysteries of the other; when marriage is proposed between representatives of certain clans, the sacred traditions are balanced, like pelf among certain peoples, to determine the fitness of the union; and primitive travelers exchange tales with tireless avidity. Accordingly, it would seem that intellectual products must arise spontaneously under the stimulus of interaction with environment, and that they must present points of similarity when the environments are similar; yet it seems equally certain that the products are diffused with great facility through absorption, and that the act of absorption is a potent intellectual stimulus. So, in brief, the course of sophic progress is toward integration of the lower activities, and toward the combination, interaction, and ultimate union of philosophic systems.

The researches indicate, in general terms, that each of the five primary categories of activities displays a convergent trend, and that all of them are interrelated; and when the five categories are juxtaposed, the convergence becomes so conspicuous as to afford a criterion for distinguishing human or demotic development from biotic development. The lines of biotic development with which naturalists are concerned are essentially divergent, the dominant process is differentiation,

and the accepted keynote is evolution; in human or demotic development the main lines are convergent and the effective processes are integration and blending.

When the effect of activital development on the human body—the material object-matter of ethnology—is considered, it is found that the demotic and the ethnic elements so interact that the former dominates the latter both directly and indirectly: (1) The mind-led activities of both advanced and primitive men lead to the exercise of certain structures (e. g., muscles of the hand) and to the disuse of others (e. g., auricular muscles), whereby the former are invigorated and enlarged, while the latter are atrophied. Accordingly, the somatikos is gradually reshaped by the demotic activities; and, since the course of development of the activities is convergent, the somatic modification is also convergent, and hence bodies of unrelated peoples tend toward a common type. (2) By reason of the essentially convergent character of the activities, discrete tribes and peoples interchanging demotic attributes through contact, are gradually brought into intellectual harmony; such harmony is attended or soon followed, as observation among the American aborigines clearly discloses, by commingling of blood, which still further reduces tribal differences, both somatic and demotic; and the ultimate effect is somatic coordination and equalization.

Conformably to custom, the operations of the Bureau during the year have been carried forward in accordance with law, and with the principles outlined in the foregoing paragraphs.

In each stage of the work the plans are determined by the data previously collected; accordingly, the annual summary of results made in pursuance of the plan formulated at the beginning of the year is never quite up to the revised classification of the end of the year. During the last year the operations were somewhat arbitrarily divided into the commonly recognized departments of (1) Prehistoric Esthetology and Technology, or Archeology, (2) Descriptive Ethnology, (3) Sociology, (4) Linguistics, (5) Mythology, (6) Psychology, (7) Bibliography, and (8) Publication, with the necessary administrative and miscellaneous work. Most of the researches

are necessarily carried forward in the field, while the field material is elaborated in the office. Accordingly, the field work and the office work are treated together except in so far as the former may be considered exploratory, when it commonly relates to different lines of primary research.

EXPLORATION

At the beginning of the fiscal year Dr J. Walter Fewkes was in the field in Arizona, having completed during June a reconnoissance of the little-known country including the northeastern extension of the Mogollon escarpment about the headwaters of Rio Verde. He repaired early in July to Holbrook, and proceeded to explore the ruined villages of northeastern Arizona. After a more or less successful reconnoissance, extending over a considerable district, he chose for detailed work the ruin known as Sikyatki. Here he was joined by Mr F. W. Hodge. It was ascertained through tradition and literary record that the ruin represented a wholly prehistoric village; and excavations were begun with the certainty that all material exhumed would, for this reason, be of especial value in indicating the aboriginal condition of the pueblo builders of this district. The anticipations were fully realized in the results. In all of the abundant material exhumed and duly transferred to the United States National Museum no trace of intrusive accultural art was found; every piece was clearly prehistoric; and the collection was the richest both in quantity of material and the quality of the ware and its symbolic decoration thus far obtained in this country. While it is especially rich in decorated pottery, many other articles illustrating primitive handicraft and customs were obtained, together with a sufficient amount of somatic material—crania, etc.—to reveal the prominent physical characteristics of the ancient people. Extensive collections were made also in the ancient ruin of Awatobi. Dr Fewkes' operations were brought to a close toward the end of August, when he returned to Washington with his collections, comprising seventeen boxes from Sikyatki and Awatobi, and three from the ruins on the headwaters of Rio Verde.

Separating from Dr Fewkes at Holbrook about the end of August, Mr Hodge, accompanied by Mr James S. Judd, a volunteer assistant, made a reconnoissance of all the inhabited pueblos of New Mexico, comprising Zuñi, Acoma, and Laguna, in the western part of the territory, Cochiti, San Felipe, Santo Domingo, Santa Ana, Sia, Jemez, Isleta, Sandia, Taos, Picuris, Santa Clara, San Juan, San Ildefonso, Pojoaque, Nambe, and Tesuque, in the valley of Rio Grande. At nearly all of these pueblos he was able to obtain valuable information relating to the social organization, beliefs, migrations, and affinities of the natives. In several cases the Indians have remained so completely isolated as to be little known to students, and accordingly much of the information is essentially new.

Mr James Mooney spent the early part of the year in the field of Oklahoma in researches concerning the Kiowa Indians, the details of which are set forth elsewhere.

Noteworthy exploratory work was conducted by Mr W J McGee in continuation and extension of the explorations in Arizona and Sonora, Mexico, begun during the last fiscal year. Outfitting at Tucson, he started southward on November 9, 1895, crossing the frontier at Sasabé and proceeding thence in a different direction from that already reconnoitered. By the middle of the month he reached the most elaborate prehistoric works known to exist in northwestern Mexico, near the rancho of San Rafael de Alamito, on the principal wash known locally as Rio Altar. The works comprise terraces, stone walls, and enclosed fortifications, built of loose stones, nearly surrounding two buttes, of which the larger is three-fourths of a mile in length and about 600 feet in height. These ruins are known locally as "Las Trincheras", or as "Trinchera" and "Trincherita". The whole of the northern side of the larger butte is so terraced and walled as to leave hardly a square yard of the surface in the natural condition; and for hundreds of square rods the ground is literally sprinkled with fragments of pottery, spalls, and wasters produced in making chipped implements, and other artificial material. Mr Willard D. Johnson, who accompanied the party as topographer (on furlough from the United States Geological Survey),

and who carried forward a route map, made detailed surveys of these ruins; a number of photographs were taken also, while a considerable collection representing the fragmentary pottery and stone art of the builders was obtained.

After spending some days in surveying the ruins at Alamito, the expedition pushed on southward, traversing the principal mountain range of western Sonora in a narrow canyon below Poso Noriega, and thence following for 50 miles the sand wash known as Rio Bacuache, which was not previously mapped. Leaving this wash near its indefinite termination on the desert plains, the course was headed toward Rancho de San Francisco de Costa Rica, where a rancheria of Seri Indians was found in 1894. On reaching this point it was ascertained that the Indians had, through a combination of circumstances, become more hostile toward white men than ever before, so that the prospect for studying their arts, institutions, and beliefs seemed most gloomy. Nevertheless, it was decided to make the effort.

At Costa Rica a rude boat was built, with the aid of Señor Pascual Encinas, of Hermosillo; a preliminary trip was then made over the continental portion of Seriland, including the Seri mountains, which were ascended for the first time by white men, and were carefully mapped by Mr Johnson. It was expected that the Indians would be encountered on this trip; but unfortunately there had been a skirmish between a small party of the Seri and a party of Mexican vaqueros two days before the expedition entered Seriland proper, and the Indians had apparently withdrawn to the coast and Tiburon island. Returning from this side trip, the boat was, with much difficulty, transported across Encinas desert and launched in Kino bay, a reentrant in the coast of the Gulf of California. The stock, with the teamsters and guides, were sent back to the rancho, while the main party proceeded up the coast to the strait separating Tiburon island from the mainland. It had been estimated from the best available data that from five to seven days would be required for crossing the strait, surveying Tiburon island, and making collections; and ten days' rations with five days' water supply were provided. The party, in addition to the leader, comprised Messrs W. D. Johnson, topog-

rapher, J. W. Mitchell, photographer, and S. C. Millard, interpreter; Señores Andres Noriega, of Costa Rica, and Ygnacio Lozania, of Hermosillo; Mariana, Anton, Miguel, Anton Castillo, and Anton Ortiz, Papago Indians; and Ruperto Alvarez, a mixed-blood Yaqui. A military organization was adopted, strict regulations were laid down for the protection of life and property, and watches were instituted and rigidly maintained.

On proceeding up the coast toward the turbulent strait El Infiernillo, severe gales were encountered, whereby progress was greatly retarded; and on reaching the strait the winds continued to blow so violently as to fill the air with sand ashore and spray at sea, and to render it impossible to make the passage. Finally, after five days, when the water was exhausted, the gale lulled sufficiently to permit a difficult crossing with a portion of the party and a small part of the scanty food and bedding; but when Messrs Johnson and Mitchell set out on the return trip to bring over Señor Noriega and two of the Indians, who remained with the supplies on the mainland, the gale rose again and, despite the most strenuous efforts, blew the frail vessel 25 miles down the gulf, where it was practically wrecked on a desert island. On the following day the wind subsided somewhat, and the two men were able to empty the boat of the sand with which it had become filled, to repair it, and finally to reach the rendezvous on the shore of Kino bay in time to meet the teamsters from the rancho when they returned to bring in the party. Here water was obtained, and Messrs Johnson and Mitchell again worked their way up the coast in the face of adverse winds, usually tracking the boat laboriously along the rocky coast; but it was not until the end of the fourth day that they rejoined the three men left on the mainland (who had suffered much from thirst) and again crossed the strait to find the larger portion of the party with the leader on Tiburon island. Meantime the group on the island had suffered inconvenience from dearth of food and blankets, and had been compelled to devote nearly all their energies to obtaining water from a little tinaja, or water pocket, in the rocks in the interior of the island, 6 or 7 miles from

the shore. All hope of the return of boat had been abandoned, and when it finally appeared the party were collecting driftwood and branches of the palo blanco—a tree growing sparsely on the mountains in the interior of the island—to build a raft, while one of the party was engaged in making the necessary ropes from provision bags and clothing.

On the reassembling of the party the original plans were resumed; the leader visited a score or more of Seri house bowers or rancherias, only to find them abandoned (though some bore evidence of occupancy within a few hours), while Mr Johnson continued the topographic surveys. By this time the food supplies were practically exhausted, but were eked out by collecting oysters, clams, and crabs, and by a shark taken on the next to the last day of the stay on the island; and, as before, most of the energies of the party were expended in carrying water from 4 to 15 miles, for which purpose squads of five or more heavily armed men were requisite, since the danger of ambush was considerable and constant. By these journeys over the jagged rocks, in which Tiburon island abounds, the shoes of the white men and the sandals of the Indians were worn out; and this condition finally compelled the abandonment of further effort to come into communication with the wary Indians. Considerable collections representing their crude arts, domestic and maritime, were, however, made in their freshly abandoned rancherias, and a fine balsa, or canoe-raft made of canes, was obtained.

After some delay and danger the strait was recrossed, and the party found themselves on the mainland, still beset by storms, without food or water, reduced by arduous labor and insufficient food, and practically barefoot in a region abounding in thorns and spines and jagged rocks. Moreover, they were still constantly under the eyes of Seri warriors watching from a distance and awaiting opportunity for attack. After fully considering the situation, the leader left the party and the boat in charge of Mr Johnson and skirted the coast on foot for 25 miles to the rendezvous on Kino bay in the hope of reaching the teamster from the rancho with supplies on the last day of his stay there under the instructions given him by

Mr Johnson on last leaving that point after the wreck. He reached the rendezvous early in the night of December 28, only to find it abandoned by reason of the accidental escape of the stock. He at once pushed on across the desert to the rancho, reaching there at sunrise of the 29th, and, immediately returning with food and water, rejoined the party a little way below the strait early in the morning of the 30th. The entire party arrived at the rancho on the evening of December 31, and two days later proceeded to Hermosillo, whence the leader returned directly to Washington, while Mr Johnson retraversed the country thence northward to the Arizona boundary, collecting objects and information among the Papago Indians, and completing the triangulation and topographic surveys. He reached Tucson about the end of January.

While the expedition was, by reason of the hostility of the Indians, unsuccessful so far as the anticipated studies of the Seri institutions and beliefs are concerned, considerable collections representing their arts were obtained. Moreover, the whole of Seriland, the interior of which was never before trodden by white men, was examined, surveyed, and mapped; indeed the survey was of such character as to yield the first topographic map of a broad belt in Sonora extending from the international boundary to Sonora river. The area covered by this survey is about 10,000 square miles. Forty-seven stations were occupied for control, and a considerably larger number of additional points for topographic sketching. The portion of the map comprising Seriland, being essentially new to geographers, has been published in the *National Geographic Magazine* (vol. VII, 1896, plate XIV).

It is a pleasure to say that the work of the expedition was facilitated in all possible ways by the state officers of Sonora and the federal authorities of the Republic of Mexico. By special authority of His Excellency Señor Leal, Secretario de Fomento, the party was permitted to cross the boundary with the outfit and necessary supplies, while the governor of Sonora, Señor Ramon Coral, offered to furnish a guard of state troops, and in other ways displayed constant interest in the work of the expedition. Much is due, also, to Señor Pascual Encinas,

an intrepid pioneer to whose courage and energy the extension of settlement in the borders of Seriland must be ascribed, and a well-known citizen of Hermosillo, without whose assistance the work would have been crippled.

ARCHEOLOGY

Dr J. W. Fewkes brought his field explorations and excavations to a close toward the end of August and proceeded to Washington, where he was for several months employed in unpacking, cleaning, repairing, labeling, and installing in the National Museum the collections of pottery and other aboriginal material obtained in the course of his work in Arizona. In connection with this duty he prepared a general paper on the results of his work for the annual report of the Smithsonian Institution, and began the preparation of a more extended and fully illustrated memoir for incorporation in the seventeenth annual report of the Bureau. He was occupied on this memoir during most of December 1895, and until his departure to the field in May 1896. In this report especial attention is given to the symbolic decoration of the pottery and to its bearing on the mythology of the Hopi Indians.

Toward the end of the fiscal year Dr Fewkes returned to the field for the purpose of making excavations and surveys of ruins brought to light through his previous reconnoissance. He was accompanied by Dr Walter Hough, of the National Museum, who was detailed as a field assistant for the season. The operations were commenced at the ruin known as Homolobi, on Little Colorado river, about three miles from Winslow, Arizona. As indicated by tradition, this village was the ancient home of a Hopi Indian clan. For a time the results of the work were not encouraging, but toward the middle of June a productive part of the ruin was reached, and within a few days 400 fine specimens were obtained, including 250 beautiful bowls, dippers, vases, jars, and other specimens of aboriginal fictile ware similar to that obtained from Sikyatki during the preceding season. Examination showed that the ware is typically Tusayan, yet in its form and decoration is archaic and without influence of civilized culture, thus demonstrating pre-

historic character. The party then repaired to another site, known as Cheylon pass, on Little Colorado river, where the excavations were successful almost from the first, so that by the end of June the field catalog of specimens had exceeded the number of one thousand. Several unique and especially significant objects were brought to light at this ruin. Some of the pottery found here is remarkably fine in texture, form, and decoration. Numerous baskets were also recovered, as well as cotton cloth, sandals, pahos (ceremonial prayer-sticks), and marine shells. Although Dr Fewkes' collections during the summer of 1895 were unprecedented in the United States for wealth and scientific value, his collections during the first half of the season of 1896 were even richer and more significant in their bearing on ethnic problems.

Early in December, Mr Frank Hamilton Cushing proceeded to Florida to resume the researches relating to the archeology of that region and to the Seminole Indians, which were commenced several months before and temporarily discontinued by reason of the inadequacy of the funds at disposal for field work. It was found impracticable to make the requisite allotment for necessary field expenses, and a tender was accepted from the Archeological Association of Philadelphia, representing the Museum of the University of Pennsylvania, for cooperation. Under the terms of the cooperation the Archeological Association assumed the cost of field work, including the subsistence of the party, the salaries of assistants to Mr Cushing, and incidental expenses connected with the operations, while the material proceeds, in the form of collections, became the joint property of the Bureau and the association, to be divided after examination and use in the preparation of reports, the scientific results remaining the property of the Bureau for publication. Under this arrangement Mr Cushing organized a party including Mr Wells M. Sawyer, of the United States Geological Survey (furloughed for the purpose), as photographer and artist; Mr Carl F. W. Bergmann, formerly of the United States National Museum, as an expert assistant in collecting; Mr Irving Sayford as clerk; and a number of workmen, who were engaged in excavation. Several localities were reconnoitered and exploited with moderate success.

During February the work was pushed into the region of coral islands in the neighborhood of Punta Rassa, where traces of extensive aboriginal handiwork were found on the islands, and especially in ancient atolls and lagoons lined with bogs and saline marl. Here the works were of such character as to indicate an extensive and well-organized primitive population, subsisting on sea food, and cruising not only the lagoons and bays but also the open gulf. Their island domiciles were protected by dikes built of large sea shells, evidently collected for the purpose; their habitations, at least in part, were pile structures, ruins of which still remain. In some cases these structures were occupied so long that the kitchen refuse accumulated to form mounds (initiating in time the custom of erecting mounds as sites for domiciles), and within the refuse heaps, or midden-mounds, extensive traces of handiwork of the people were found.

The most extensive collections were made from bogs adjacent to the habitations, or beneath habitations occupied too briefly to permit extensive accumulations of middens. In these bogs were preserved numerous artifacts, comprising shellwork in large variety; wooden ware, including utensils, tools, weapons, masks, and other ceremonial objects, often elaborately carved and painted; textile fabrics and basketry in abundance, though usually in such a state of decay as hardly to be preservable; implements and other objects made partly or wholly of teeth and bone of sharks, land animals, etc.; and a few stone implements of the usual aboriginal character. The painting and carving are especially noteworthy, not only as indicating moderately advanced symbolic art of the native type, but as suggesting community of culture between the maritime people of Florida and prehistoric peoples of the western and southern shores of the Gulf of Mexico. The handiwork shows no trace of Caucasian influence, and must therefore be regarded as pre-Columbian, though the mode of life indicated by the relics is similar to that observed on the Florida peninsula by the earliest white explorers. The wooden ware, textiles, etc., preserved in the salt-water bogs commonly retained their aboriginal appearance until exposed to the air, when they rapidly disintegrated and fell to pieces,

or else shrunk or warped so greatly as to give little indication of the original form. A considerable part of the energies of the party were expended in efforts to preserve these perishable articles by various devices and the use of such materials as could be obtained at points remote from civilized stores, while Mr Sawyer was constantly employed in photographing or in drawing and painting in the original colors all the more perishable objects; in this way the evidence concerning the prehistoric people recorded in the better-preserved portions of the collection was greatly amplified and extended.

In April the Director visited Mr Cushing and remained with the party, personally inspecting and directing the work, for several days. The operations in Florida were brought to a close in May, when the collections were carefully loaded in a car and transported direct to Philadelphia, where the space and facilities for unpacking were ample. Mr Cushing returned to Washington, and on the arrival of the car proceeded to Philadelphia, where he unpacked that portion of the collection required for immediate study.

Mr Cushing's Florida work threw new light on the shell mounds and other aboriginal works on the American coasts, and it was accordingly thought desirable to review the earlier and more superficial examination of these works at different points along the coast. Carrying out this plan, the Director proceeded about the middle of June to the coast of Maine, which has long been known to abound in aboriginal shell heaps. There he was soon afterward joined by Mr Cushing, and surveys and examinations of the prehistoric works were under way at the close of the fiscal year.

DESCRIPTIVE ETHNOLOGY

As administrative duties permitted, Mr F. W. Hodge carried forward the *Cyclopedia of the American Indians*, his field work among the Pueblos in August and September yielding much information concerning the relations, and especially concerning the clan organization, of the southwestern Indians. In February Dr Cyrus Thomas, having completed his revision and extension of work on Indian land treaties, was transferred

to the Cyclopedia, and during the remainder of the fiscal year he was employed in collecting and arranging material relating to the tribes of the Algonquian stock. The character of this Cyclopedia was set forth fully in the last report.

During the earlier part of the year Dr Thomas revised and brought up to date the Royce memoir on treaties with the Indian tribes relating to the cession of lands (also described in the last report). The task proved greater than had been anticipated, since extended research was required for bringing the work to date, and since this necessitated the reconstruction of several of the maps. The laborious work was carried forward energetically by Dr Thomas, and the requisite additions to and modifications in the schedule were made, the maps were prepared, and an introductory and explanatory chapter was written. The work was completed early in April, and was prepared for transmission to the Public Printer for issue as volume VIII of the Contributions to North American Ethnology, when on examination of the statutes it was found that the public printing law approved January 12, 1895, seems to terminate that series. Accordingly, the document was held for incorporation in the eighteenth annual report.

In the early part of the year Mr James Mooney was employed in the field in researches among the Kiowa and Kiowa Apache Indians of Oklahoma and Indian Territory. One of his lines of research related to the camping circle of the combined Kiowa and Kiowa Apache group, in which the tents are arranged in a certain definite order expressing the social organization and conveying other symbolic meanings; his studies extended also to the patriarchial shields attached to the tents, and to the drawings and paintings by which both shields and tents are decorated. He found that all of these decorations are symbolic, and collectively represent a highly elaborate system of heraldry, and most of his time in the field was devoted to tracing the ramifications and interpreting the details of the heraldic system. Special attention, too, was given to the calendars, or "winter counts," of which several were found among these Indians. These calendars, which represent the beginning of writing, are long-continued records

of current events, represented pictographically by rude drawings and paintings on skins or fabrics; and from them the important events in the history of the tribes for many years can be determined with accuracy.

Another line of research related to the use of peyote by several of the southern plains tribes in their ceremonials as a paratriptic and mild intoxicant; this article, as used by the Indians, is the upper part of the cactus known botanically as *Anhalonium lewinii* or *Lophophora williamsii lewinii*, which grows in the arid region of Texas and eastern Mexico. The tops of the plants are collected and dried, when they form button-like masses an inch or more in diameter and perhaps one-eighth of an inch in thickness; these buttons are eaten by the Indians in certain protracted and exhausting ceremonies. Their effect is to stimulate and invigorate the system to such an extent as to permit active participation in the dance and drama for many consecutive hours without fatigue, while at the same time mental effects somewhat akin to those of hashish are produced, whereby the condition of trance or hallucination, which plays so important a part in all primitive ceremonies, is made more complete than is customary or even possible under normal circumstances. In addition to studying effects produced on the Indians themselves by the use of the poison, Mr Mooney collected a considerable quantity of the material for scientific examination. By courtesy of the Department of Agriculture, the buttons were analyzed by Dr Harvey W. Wiley and Mr E. E. Ewell, of that Department, and were found to yield three alkaloids, designated, respectively, as anhalonine, mescaline, and alkaloid 3, besides certain resinous substances; all possess peculiar physiologic properties. The physiologic action of the mescal buttons administered entire, and also of the three alkaloids, has been tested by D. W. Prentiss, M. D., and F. P. Morgan, M. D., and the results have been found to be of great interest, leading the experimentalists to consider the extracts as important therapeutic agents and valuable additions to the pharmacopœia.

On his return from the field Mr Mooney began the preparation of a memoir on the Kiowa calendars, which was nearly

completed at the end of the fiscal year, and is appended to this report.

As during past years, much attention has been given to photographing Indians and Indian subjects, and a small photographic laboratory has been maintained. During the winter advantage was taken of the presence of representative Indians in the national capital, and a number of portrait photographs were obtained, together with considerable genealogic information concerning various chiefs and leading men among several tribes.

SOCIOLOGY

Except while occupied in administrative work, Mr W J McGee, ethnologist in charge of the Bureau, has been carrying forward researches relating to the social organization of the Indian tribes. His work is based on the voluminous records in the archives of the Bureau and on observations especially among the Papago and Seri Indians. It has been the aim to render this work fundamental, and to this end the primary characteristics of mankind as distinguished from lower organisms have been considered with especial care. The studies of the Seri Indians have been particularly fruitful. Among the results of the researches there may be mentioned (1) an analysis of the beginning of agriculture, (2) the recognition of the beginning of zooculture, (3) a study of the growth of altruistic motive, and (4) an examination of early stages in the development of marriage. These results are incorporated partly in a preliminary memoir on the "Siouan Indians" printed in the fifteenth annual report, partly in several administrative reports, partly in an address published in the Smithsonian annual report for 1895, but mainly in a memoir appended to this report.

It may be noted summarily that the researches concerning the beginning of agriculture indicate that this important art originated independently in different desert regions, and was at first merely an expression of a solidarity into which men and lower organisms were forced by reason of the environmental conditions characteristic of the desert. Later the art was raised to a higher plane through the gradual development of irrigation, and still later it was extended into areas in which irrigation

was not required. The researches concerning zooculture serve to define a stage antecedent to domestication, as that term is commonly employed, in which the relations between men and animals are collective rather than individual, and in which the men and animals become mutually tolerant and mutually beneficial, as when the coyote serves as a scavenger and gives warning, in his own cowardly retreat, of the approach of enemies. Later, such of the tolerated animals as are thereby made more beneficial are gradually brought into domestication, as was the coyote-dog among many Indian tribes, the turkey among some, and the reindeer among certain Eskimo. The researches concerning the development of human motive are involved in the study of primitive law, and indicate that regulations concerning conduct are framed by the elders in the interest of harmony and collective benefit, and that these regulations are enforced until their observance becomes habitual, when the habit in turn grows into motive. In some other directions, also, substantial progress has been made in the study of the organizations and institutions of the American Indians.

LINGUISTICS

During a considerable part of the year the Director has been occupied in researches concerning several characteristics of the American Indians, with the view of developing a system of classification so complete as to indicate not only the affinities of tribes and stocks among each other, but the general affinities of the native American people and their position among the races of men as well as among other living organisms. In the course of this work much thought has been given to the subject of Indian language, and the rich collections of linguistic material in the archives of the Bureau have been scanned anew. It was the immediate purpose of this study to trace the development of various languages in such manner as to educe the laws of linguistic evolution. Satisfactory progress was made, and a considerable body of manuscript was prepared, while a preliminary publication was presented during the year in the form of an address titled "The Relation between Institutions and Environment", delivered in the United States National

Museum, May 23, 1896, and printed in the Smithsonian report for 1895. The records indicate that the four or five dozen distinct linguistic stocks in this country have been rendered more or less composite by the blending of peoples; the researches seem to show that a still larger number of distinct languages were originally developed independently, in small discrete groups, which gradually combined into larger tribes and confederacies, and sometimes grew so large as again to subdivide and to spread over vast areas; and in various other directions these researches have been found to throw light on the characteristics and relations of the Indians.

Dr Albert S. Gatschet has been continuously employed in the collection and study of linguistic material pertaining to the Algonquian stock. During July he utilized the services of Mr William Jones, a mixed-blood Sauk of exceptional intelligence, a pupil at Phillips Academy, Andover. Although he has been absent from his tribe for some time, he was able to convey to Dr Gatschet a large amount of new material. About the middle of October Dr Gatschet visited the survivors of the Miami Indians at Peru, Indiana, and afterward proceeded to the Miami town on Osage river, Indian Territory, now the center of the Peoria confederacy. At both places he was able to obtain extensive collections relating to the language and mythology of the people. During the remainder of the fiscal year he was occupied in arranging the new material and in comparing it with other Algonquian records, and made considerable progress in the preparation of a comparative Algonquian vocabulary.

Mr J. N. B. Hewitt was employed in the early part of the year in applying the laws of linguistic development to the Iroquoian stock, and thereby tracing the affinities and prehistoric growth of this extensive and important group of American Indians. Through this study he was able to ascertain the order in which different members of the group differentiated, and either separated from the main body or developed distinct organization. Representing the Iroquoian body as the trunk of a genealogic tree, it appears that the lowest branch is represented by the Cherokee and the second and third by the Huron

and Seneka-Onondaga, the several tribes represented by the uppermost branches being but slightly differentiated. Thus the linguistic history of the Iroquoian stock is one of differentiation and division, probably combined with assimilation from other stocks. It may be observed that this history is parallel to that wrought out for the Siouan stock by Dorsey and that which Gatschet is now tracing in the Algonquian stock; but this apparently aberrant course of linguistic evolution in certain instances is in no way inconsistent with the general course of the development of language, which tends toward unity through the combination and assimilation of the various tongues. Subsequently Mr Hewitt was occupied in analyzing and scheduling the vocabulary of the Tubari language, collected in northern Mexico by Dr Carl Lumholtz, and in preparing the matter for publication. The closing months of the year were spent in cataloguing manuscripts and other material stored in the fireproof vaults of the Bureau.

MYTHOLOGY

Mrs Matilda Coxe Stevenson continued the study and elaboration of her records concerning the mythology and ceremonies of the Zuñi Indians, and practically completed her monograph on this subject. The Pueblo Indians, and especially the Zuñi, are characterized by an extraordinary subserviency to belief and ritual. Before her connection with the Bureau Mrs Stevenson became intimately acquainted with the Indians of several pueblos and with their peculiar fiducial customs, and has consequently had unprecedented opportunity for the study of observances and esoteric ceremonies, and it has been her aim to record the details of her observations with pencil and camera so fully as to perpetuate these mysteries for the use of future students. In nearly every respect she regards her records concerning the Zuñi as complete. At the end of the fiscal year her monograph was finished with the exception of a single chapter, the material for which was incomplete. It was planned to have this material collected during July and August, 1896.

During the greater part of the year Mr Cushing's work in mythology was suspended, as he was engaged in general archeologic work. During the early part of the year, however, he spent several weeks in combining the records of archeology, mythology, and modern custom bearing on the evolution and multifarious uses of the arrow, and incidentally on the invention of the bow. His researches illustrate well not only the great importance of the arrow as a factor in human development, but also the way in which primitive peoples think, act, and evolve. The final report on this subject is not yet complete, but a preliminary statement of results was made public in the form of a vice-presidential address before the American Association for the Advancement of Science at the Springfield meeting, 1895.

PSYCHOLOGY

It has not been found expedient in the Bureau to extend the researches to the somatology of the Indians, and all the material pertaining to this subject has been turned over to another branch of the Federal service; but it has been found impossible to trace the development of the arts and institutions, beliefs and languages of the aborigines without careful study of primitive modes of thought, and much attention has been given by the Director and some of the collaborators to the subject of psychology, as exemplified among the Indians. The researches in this direction have been carried forward during the year in connection with the work in classification of the Indians, and considerable material has been accumulated for publication in future reports.

BIBLIOGRAPHY

The bibliographic work, which has been continued for several years, practically closed with the last fiscal year, and finally terminated, so far as the original plan is concerned, with the death, on July 26, of James Constantine Pilling. The bibliography of the Mexican languages was left in an advanced condition; but it has not yet been found practicable to complete this work and prepare it for the press.

PUBLICATION

Satisfactory progress has been made during the year in the editorial work of the Bureau, which has been conducted chiefly by Mr F. W. Hodge.

The manuscript of the fourteenth annual report was sent to press toward the close of the last fiscal year; the first proofs were received on January 25, 1896, and by the close of the fiscal year the body of the volume was nearly all in type. This report, which is to be published in two volumes, making about 1,200 pages, comprises, in addition to the report on the operations of the Bureau and an exhaustive index, three memoirs—"The Menomini Indians", by Walter J. Hoffman, and "Coronado's Expedition in 1540-1542", by George Parker Winship, occupying the first part, and the "Ghost-dance Religion", by James Mooney, occupying the second part. This report, like the preceding volumes of the series, will be amply illustrated, and it is expected that it will be ready for distribution before the close of the calendar year.

Although the manuscript of the fifteenth annual report was transmitted to the Public Printer on June 14, 1895, no text proof was received during the fiscal year; the proofs of the illustrations have, however, been received and approved. The accompanying papers of the fifteenth report comprise "Stone Implements of the Potomac-Chesapeake Tidewater Province," by W. H. Holmes; "The Siouan Indians," by W J McGee, a paper complementary with and introductory to a posthumous memoir on "Siouan Sociology," by James Owen Dorsey; "Tusayan Katchinas," by J. Walter Fewkes, and "The Repair of Casa Grande Ruin, Arizona, in 1891," by Cosmos Mindeleff. The volume contains upward of a hundred plates, in addition to numerous figures in the text, all of which have been engraved.

The manuscript of the sixteenth annual report was sent to the Government Printing Office on September 27, 1895. The illustrations have all been engraved, but no proof of the text had been received at the close of the fiscal year. The accompanying papers of this report are "Primitive Trephining," by Manuel Antonio Muñiz and W J McGee; "Cliff Ruins of

Canyon de Chelly, Arizona," by Cosmos Mindeleff, and "Day Symbols of the Maya Year," by Cyrus Thomas.

The only volume published by the Bureau during the fiscal year was the thirteenth annual report, which was delivered by the Public Printer in May, and at once transmitted to the numerous correspondents of the Bureau throughout the world. This volume, for which the demand from students has been unusually large, contains, in addition to the Director's report of 59 pages, the following memoirs: (1) "Prehistoric Textile Art of Eastern United States", by William H. Holmes, pages 3-46, plates I-IX, figures 1-28. (2) "Stone Art", by Gerard Fowke, pages 47-178, figures 29-278. (3) "Aboriginal Remains in Verde Valley, Arizona", by Cosmos Mindeleff, pages 179-261, plates X-L, figures 279-305. (4) "Omaha Dwellings, Furniture, and Implements", by James Owen Dorsey, pages 263-288, figures 306-327. (5) "Casa Grande Ruin", by Cosmos Mindeleff, pages 289-319, plates LI-LX, figures 328-330. (6) "Outlines of Zuñi Creation Myths", by Frank Hamilton Cushing, pages 321-447.

MISCELLANEOUS WORK

Library.—It is the plan of the Bureau to maintain a small working library for the use of the collaborators, and it has grown slowly through accessions, acquired chiefly by exchange for reports, the growth barely keeping pace with the publication of anthropologic works. At the end of the fiscal year the library numbered 5,501 volumes, having increased by 472 volumes during the preceding twelve months. In addition, there was a proportionate accession of pamphlets and periodicals.

Illustrations.—The preparation of illustrations for the reports has been continued under the direction of Mr DeLancey W. Gill. The drawings have been executed by a number of artists, while the photographs have been made chiefly by Mr William Dinwiddie. In addition to the photographic work required for the immediate illustration of reports, the various collaborators at work in the field are supplied with cameras, and make considerable numbers of photographs, by which

their notes are supplemented and enriched, and many of these photographs are incorporated in subsequent reports. Extensive series of photographs were made during the year by Dr Fewkes in connection with his collections of Pueblo pottery; by Mr J. W. Mitchell, photographer for Mr McGee in the Seriland expedition, and by Mr Wells M. Sawyer, artist for Mr Cushing in his Florida work.

Exhibits.—The Bureau cooperated with the National Museum in arranging the Smithsonian Institution exhibit in the Cotton States and International Exposition held at Atlanta during the autumn of 1895. An alcove in the Government building was allotted to the Bureau, and this was filled by the installation of six wall cases and four floor cases, together with a number of bulky objects arranged on top of the wall cases. This exhibit was so arranged as to illustrate the characteristics and modes of life of three tribes, viz: The Cherokee Indians, who formerly occupied the country which is now northern Georgia, and whose descendants still live in western North Carolina only 150 miles from the site of the exposition; the Papago Indians, a little known though highly interesting tribe of peaceful Indians, occupying southwestern Arizona and northern Sonora; and the Seri Indians, a fierce and exclusive tribe of the Gulf of California, part of whom were found on their borderland in the course of an expedition by the Bureau during 1894. In addition to the objects exhibited, there were in two wall cases illustrations of the physical characteristics and costumery of the Papago and Seri Indians. The former were represented by a group of life-size figures engaged in the manufacture of pottery—their typical industry. In the other case a life-size figure of a Seri warrior was introduced. The collections were supplemented by a series of twelve transparencies, made from photographs, showing the Papago and Seri Indians in characteristic attire, with their habitations and domestic surroundings. In the installation of this exhibit, primary attention was given to fidelity of representation rather than to artistic finish or grouping; and it is a source of gratification to observe that the exhibit attracted much attention during the progress of the exposition. It was awarded a grand prize, diploma, and gold medal.

NECROLOGY

James Constantine Pilling, who died July 26, 1895, was a native of the national capital, where he was born November 16, 1846. He was educated in the public schools and Gonzaga College, and subsequently strengthened his predilection toward books by taking a position in a leading bookstore of the city; at the same time he studied the then novel art of stenography, in which he became remarkably proficient. At the age of twenty he was appointed a court stenographer. His services soon came into demand among the Congressional committees and in different commissions employed in the settlement of war claims. In every instance his notable speed and accuracy were joined with even more notable discretion and straightforwardness that gained for him the esteem of all with whom he came in contact. His career as stenographer was in every respect exemplary, and his example served to hasten the general introduction, and at the same time to elevate the standard, of stenographic art as an aid in the transaction of the public business.

In 1875 Mr Pilling was employed by the Director, then in charge of the Geographical and Geological Survey of the Rocky Mountain Region, to aid in collecting native vocabularies and traditions, a task for which he was eminently fitted by reason of his phonetic and manual skill. In this service as in his earlier work he displayed not only high ability but signal strength of character. His connection with the Survey was continued until that organization was brought to an end in 1879 by the institution of the United States Geological Survey to carry forward the geologic work, and the Bureau of American Ethnology to continue the ethnologic researches; he was then transferred to the latter Bureau, where his work on the Indian languages was continued. During this period of connection with ethnologic work his studious habits were strengthened, and he developed great interest in the literature relating to the Indians; so that he readily adopted the suggestion of the Director to begin the preparation of a list of books and papers containing Indian linguistics. In this study the industry and accuracy which characterized his stenographic

work were constantly displayed, and ever-increasing confidence was reposed in his trustworthiness. In connection with his stenographic and bibliographic work, he was intrusted with the supervision of the editorial work of the reports of the Rocky Mountain survey and the newly instituted Bureau, and in addition considerable clerical work fell to him; yet every duty was performed with alacrity, fidelity, and wisdom. Despite the multiplication of duties, his literary and bibliographic methods remained excellent, and even improved with time; and his conscientious care was so invariably manifested in his bibliographic work that his rapidly growing list came to be recognized as a standard from which it were bootless to appeal. It was during these years, from 1875 to 1880, that the foundation for Pilling's character as bibliographer was laid and securely established.

In 1881 the Director of the Ethnologic Bureau was made Director also of the United States Geological Survey; Mr Pilling was then appointed chief clerk of the Survey, and the customary administrative duties were devolved on him. These duties were ever performed energetically yet judiciously, and withal so courteously and impartially as to gain for him the confidence of every collaborator in that rapidly growing Bureau. In this position he continued until June 30, 1892. During this period he served also as chief clerk of the Ethnologic Bureau in an eminently acceptable manner; and although his administrative work as the second officer in the two Bureaus might well have been regarded as sufficient to occupy all the energies of one man, he never forgot his bibliography, and so ordered his duties that few days passed without some addition to his list of books on Indian linguistics. Meantime his search for rare and little-known works brought him into correspondence with dealers, bibliophiles, missionaries on the outposts of civilization, travelers in Indian lands, and many others, and he frequently found it necessary to purchase books in order that their contents might be examined and their titles noted; and in this way he gradually accumulated a unique library—one of the richest collections of rare books relating to Indian tongues now in existence. In 1885 there was issued for the

use of collaborators and correspondents of the Bureau, in a small edition, a quarto volume of nearly twelve hundred pages, entitled "Proof-sheets of a Bibliography of the Languages of the North American Indians, by James Constantine Pilling." This volume represented the results of Mr Pilling's bibliographic work up to that date, and served as a basis for the classification on the part of the Director of the North American tribes by linguistic characters. The printing of this volume served to deepen the interest of the bibliographer in his task, and within a year or two the issue of a series of bibliographies relating to various Indian stocks or families was begun.

As time passed Mr Pilling developed an ailment that culminated in his death, and his duties were varied, so far as the legal conditions controlling governmental bureaus permitted, in the hope of bringing relief; but despite every effort the malady increased. In 1892 he was relieved of his duties as chief clerk of the Geological Survey and the Bureau of American Ethnology, and was transferred to the latter Bureau and employed solely in continuing the bibliographic work. For a time he benefited by the transfer, and his duty was performed with great energy and continued skill and success, so that by the end of 1894 his bibliographies of the Eskimo, Siouan, Iroquoian, Muskhogean, Algonquian, Athapascan, Chinookan, Salishan, and Wakashan languages were completed and printed. He was then engaged in the bibliographies of the Shapian language and the Indian languages of Mexico, and this work was carried forward during the early months of 1895, even after its author had become practically helpless through the insidious and uncontrollable advance of a hopeless disease. The work was not finished.

The series of bibliographies prepared by Mr Pilling are a monument to his memory and a model for students. In thoroughness and accuracy of work they afford a bright example of American scholarship.

In personal character Mr Pilling was above reproach. No man was more steadfast to his moral and intellectual convictions, which were held with that charity for others which is possible only to those who have strong and well-founded

convictions of their own. The influence of his example and his character will long remain in the institutions with which he was connected.

FINANCIAL STATEMENT

Appropriation by Congress for the fiscal year ending June 30, 1896, "for continuing ethnological researches among the American Indians, under the direction of the Smithsonian Institution, including salaries or compensation of all necessary employees" (sundry civil act, approved March 2, 1895).....			\$40, 000. 00
Salaries or compensation for services.....	\$29, 773. 65		
Traveling and field expenses.....	\$5, 166. 22		
Drawings and illustrations.....	290. 50		
Office rental	999. 96		
Ethnic material (specimens, etc.)	21. 48		
Office furniture	393. 77		
Publications for library.....	218. 48		
Stationery	474. 59		
Freight	31. 40		
Temporary services	440. 00		
Supplies	617. 81		
Miscellaneous.....	128. 01		
		8, 782. 22	
			38, 555. 87
Balance, July 1, 1896, to meet outstanding liabilities.....			1, 444. 13

CHARACTERIZATION OF ACCOMPANYING PAPERS

DISTRIBUTION OF SUBJECTS

The four accompanying papers, illustrating the methods and results of work conducted by the Bureau, find their subjects in the western portion of the continent. The first paper deals with a little-known portion of northwestern Mexico and a local tribe which retains aboriginal characteristics to an unusual and perhaps unequaled degree. The field work involved the survey of considerable areas hitherto untrodden by white men and the first scientific observation of the tribesmen and their customs in their own habitat. The second paper relates to a typical tribe of the plains, hitherto little known to scientific students; and while the tribesmen are now confined to a reservation, they formerly ranged from the snowy plains of Canada to the sun-parched bolsons of Mexico, while the tribe as a whole slowly migrated from the Saskatchewan to the Arkansas, so that the area covered by the study is coincident with that of the Great Plains from the Mississippi to the Rocky mountains. The two remaining papers deal with the arid plateau region of the southwest. The third treats of a tribe prominent in the history of American exploration and settlement, revealing a new and highly significant aspect of their everyday life and their adjustment to a distinctive environment. The researches summarized in the fourth paper shed light on the life and habits of other tribes, under the same peculiarly effective environmental conditions, during prehistoric time.

The historical range of the papers covers several centuries. The objects described by Dr Fewkes represent, for the most part, a period considerably antedating the Columbian discovery; but the method of research has been to compare the prehistoric works with those of living people in the same region, in such manner as, in some measure, to penetrate the mists of

antiquity. Dr Fewkes' interpretation of the prehistoric objects is supplemented by Mr Mindeleff's rendering of traditions and ceremonial customs, developed in the shadowy past and perpetuated through the generations up to the present. In somewhat similar fashion Mr Mooney analyzes and interprets the calendric records and traditions of the Kiowa Indians in such manner as to trace their history through many generations, and at the same time he is able to verify the history and reduce it to a fairly definite chronology by identifying events as those attending the Caucasian invasion. Mr McGee's memoir is devoted chiefly to the contemporary condition of the tribe described, but attention is given to its history for the three and a half centuries during which some of the outward characteristics of the people have been known to Spanish and American pioneers, while the prehistoric records of the region receive some consideration. One of the ends of ethnologic research is the determination of the trend of tribal development; and the investigations described in the accompanying papers have been so directed as to cover a considerable period, with the view of throwing light on the causes, conditions, and effects of sequential progress among primitive peoples.

The obverse of historical succession is cultural progress; and the several papers exemplify almost the entire range of culture status found among the American aborigines. Among these aborigines known to Caucasians the Seri Indians appear to stand nearly or quite at the bottom of the scale. They are without agricultural or other organized industries; they still haunt their primeval shorelands, and their fisheries are crude and simple, while their watercraft (in which their culture culminates) are practically individual in design, manufacture, and function; and their social organization is of peculiarly significant simplicity. Much higher in the scale of cultural advancement stand the Kiowa Indians, who were successful hunters, and had reached a peculiarly developed social organization adjusted to their customs of chase and war. Still more advanced in some respects, though apparently less so in others, were the Navaho tribesmen, who were proficient in the chase, yet predominantly agricultural in industry and almost or quite sedentary in habit, though their social organization was but

moderately advanced anterior to the shock of contact with white men. Somewhat further advanced in certain respects must have been the prehistoric Hopi of Sikyatki whose artifacts were exhumed in such abundance by Dr Fewkes, a people at least culturally related to the peculiarly advanced tribes of Mexico whose structures and institutions so impressed the conquistadores; they were practically sedentary like their descendants in Tusayan today and essentially agricultural through aid of irrigation, were skilled artificers in certain lines, and were organized on a social and fiducial plan of considerable complexity and refinement.

In their relation to the categories of human activities the range of the papers is broad. The first is general, touching on the somatology and incidentally on the psychology of the Seri Indians, and traversing the entire series of their activities so far as these are known; the second is devoted especially to activital products of the Kiowa Indians connected equally with arts of pleasure and arts of expression, but the description and discussion touch and fairly cover the entire series of activities; so, too, the third paper pertains primarily to a special line of industrial activity, yet the consideration extends to beliefs, institutions, form of expression, and even to esthetic concepts and products; while the fourth paper deals with esthetic products in their relations to a considerable range of activities. Collectively the papers contribute especially to esthetology and technology, in somewhat less degree to sophiology and sociology, and in some measure to philology.

THE SERI INDIANS

The aboriginal tribe known as Seri, Seris, Sseris, Ceris, or Ceres, is of interest in many ways. Notably exclusive and intolerant of aliens, the tribesmen retain priscan characteristics to an exceptional degree, and their activities accordingly reflect environment with exceptional closeness. Thus the study of the tribe materially extends the developmental range covered by the researches of the Bureau, and correspondingly enlarges and strengthens the conceptions of human development based on the study of the native American tribes.

It is significant that the Seri Indians make little use of stone in their industries; shell, tooth, bone, wood, cane, and other less refractory substances are freely used, but the employment of stone is subordinate and largely incidental, despite the abundance of this material. This industrial characteristic is in line with the other characteristics of these tribesmen, and appears merely to measure their slight advance in conquest of environment.

It is equally significant that the stone art of the Seri is largely inchoate, as indicated by the absence or feebleness of design on the part of the artisans. In large part the industrial use of stone is fortuitous and temporary, or of such sort as merely to meet emergency; when the use is repeated, the emergency implement gradually assumes a fairly definite form determined by the wear of use; but the users have evidently not risen to the plane of preconceived pattern for their common industrial implements, or indeed for any stone artifact save the little-used arrowpoint. It is particularly noteworthy that, except in the case of the arrowpoint, fracture is not only not employed in the manufacture of implements, but is regarded as destructive of the utility of the implement to such an extent that accidentally fractured pieces are cast aside and abandoned. The distinctive features of Seri stonework have led to a redefinition of primitive stone art as (1) *protolithic* and (2) *technolithic*. The essential feature of protolithic art is absence of design—while the artifacts of the class shaped merely by use are often polished, they are seldom if ever shaped by fracture; the essential feature of technolithic art is antecedent design or pattern, to which the implements are conformed by fracture, battering, grinding, and other purposive processes. The sequence of the types, although brought out clearly for the first time by the researches among the Seri, is evidently a natural one, marking normal advance in that conquest of environment in which all known peoples are engaged.

Although less complete than would be desirable, the observations on face-painting among the Seri Indians are of interest. The researches of recent years have shown that the decorative devices of primitive peoples are largely symbolic.

The observations among the Seri not only support the general conclusion, but apparently illumine an initial stage in the development of decoration in which the nascent devices representing the major portion of the esthetic exercise of the people are interwoven with the fundamental activities of social character. Accordingly, the face-painting of the Seri matron appears to represent a priscan stage in the conquest of environment through social mechanism; and the low culture stage marked by the esthetic development accords with that marked by the industrial development as manifested in stoneworking.

Another significant characteristic of the Seri Indians is a peculiar and nearly unique marriage custom, which apparently reflects, and at the same time tends cumulatively to strengthen, animosity toward alien neighbors. Previous researches have shown that intertribal mating, especially when prescribed by the tribal rulers, affords the most effective means of integrating tribes, strengthening demotic units of all grades, and promoting the growth of peoples; and the observably effective operation of this social device among various primitive peoples suggests a still more primitive stage in which the device was less effective or absent. Now, the custom of the Seri appears to represent the lower stage of social mechanism toward which the higher customs point as the initial one; hence, although perhaps intensified by conditions, the custom appears to complete the series of stages in tribal development as defined by that most effective of all simple social devices, marriage. It is noteworthy that the social mechanism of the Seri is adapted only to a restricted environment limited by alien neighbors, so that the marital mechanism corresponds with the associated industrial and esthetic and social devices in marking slight advance in conquest of environment.

CALENDAR HISTORY OF THE KIOWA INDIANS

In some respects a typical plains people, the Kiowa Indians are characterized by distinctive features revealed through Mr Mooney's researches. Originally inhabiting a northerly and mountainous territory, they were driven to subsistence on the products of the chase; becoming expert and vigorous hunts-

men, they ranged in parties far over adjacent territory; brought into contact with a wide range of climatal conditions and the long series of natural conditions depending on climate, the tribe was led in the direction of easier livelihood; and thus the body slowly migrated first from the mountains to the foothills and plains, and then southward over the open plains until the movement was arrested by encroaching settlement, when they occupied the country drained by the Platte and neighboring rivers. Meantime the roving habit continued, gaining strength through the acquisition of the horse, and the hunting parties frequently invaded and traversed territory claimed by other tribes, so that the huntsmen became warriors and the hunting expeditions became predatory forays; and about the time of the Caucasian's coming, roving parties of the Kiowa occasionally passed northward well toward Hudson bay, eastward nearly or quite to the Mississippi, southeastward to the Gulf of Mexico, and southwestward nearly or quite to the Pacific. Naturally these migratory and predatory wanderings kept the tribesmen in contact with an exceptionally extended and varied environment, both physical and social; and the effects of the environmental interactions are revealed in the several distinctive characteristics of the tribe.

A conspicuous characteristic of the Kiowa is the apparent absence of the clan or gentile system; for, despite intimate acquaintance with and adoption into the tribe, Mr Mooney was unable to discover unmistakable traces of this commonly prominent feature of primitive organization. Now, on reviewing the tribal customs, it becomes evident that the roving Kiowa Indians enjoyed contact with other tribes and consequent acculturation to an exceptional if not unique degree; sometimes the association was amicable, when ideas and devices were freely interchanged; frequently the association was inimical, when the Kiowa were commonly enriched by the acquisition not only of plunder but of captives, who were subsequently adopted into the tribe; so that the general effect of the wide association was to extend the intellectual range and differentiate the blood of the Kiowa. Especially important was the habitual adoption of captives, since the effect of adop-

tion in Indian tribes is always to introduce arbitrary relationships tending to break down the natural kinship system; yet hardly less important were the oft-recurring expeditions, since they involved more or less arbitrary extensions of the simple tribal organization, somewhat analogous to those attending the development of patriarchy among regularly nomadic peoples. Collectively, the conditions growing out of the roving and predatory habits of the Kiowa must have tended in exceptional if not unique degree to subordinate the prevailing consanguineal organization of primitive society, and to gloss or even to replace it with a more strictly artificial or demotic system corresponding to that of higher culture. Accordingly, the inconspicuousness of gentile organization among the Kiowa Indians would seem to be but a normal consequence of the measurably peculiar habits and history of the tribe.

Another noteworthy characteristic of the Kiowa Indians is found in an elaborate system of heraldry, to which Mr Mooney makes little more than casual reference, full details being reserved for another memoir. While the heraldic system does not require extended explication in this connection, it demands allusion by reason of its connection with the social organization; for it is evidently an artificial substitute for the simpler and more nearly natural clan or gens or totem normal to primitive culture, and marks social advance comparable with that reached by certain other peoples only with the abandonment of tribal organization and the adoption of organization on a territorial basis. Accordingly the heraldic system is peculiarly significant in attesting the direct interpretation of the social structure.

A noteworthy, although not unique, characteristic of the Kiowa Indians is expressed in a calendar system or system of recording conspicuous events in the history of individuals and the tribe. This system is described in detail in the accompanying memoir. Previous to the institution of the Bureau, the best-known example of aboriginal inscription of the present territory of the United States was the Walam Olum of the Delawares; with the inauguration of systematic researches relating to native pictography, the now well-known winter

count of Lone-dog was brought to light. For some years this was regarded as a unique production on the part of the plains Indians, and hence of less significance and value than typical productions; but the discoveries of similar records among the Kiowa Indians, including the three calendars acquired by Mr Mooney, the one obtained by Captain Scott, and the tradition of a fifth example buried with the body of its maker a few years ago, serve to show that calendric inscription was typically characteristic of the plains Indians up to the time of modification by white influence. Accordingly, the discoveries of the Kiowa calendars are of no little significance to ethnologic students, while the interpretation of the records through the aid of contemporary tradition and individual memory materially enhances their importance.

The chief value of the Kiowa calendars lies in the fact that they are not merely illustrations, but seriously considered applications, of primitive pictography. They stand for that critical stage in the development of expression in which men sought to perpetuate their deepest impressions, and hence constitute the germ of writing, and reveal the mental and manual processes attending the all-important transition from the pre-scriptorial plane to scriptorial culture. The carefully interpreted calendars of the Kiowa supplement the tribal traditions, and render it feasible to compare the episodes of their history with those recounted and recorded by other peoples; thus they furnish a striking example of practically useful historical records prepared by aboriginal historians in accordance with aboriginal methods. Yet even this strong interest is overshadowed by the significance of the interpreted calendars as mirrors of primitive method, and as guides to the meaning of ill-understood aboriginal records from other sections.

NAVAHO HOUSES

The Navaho Indians stand in strong contrast to the Kiowa, alike in habitat and habits. They ranged over a peculiarly arid and arenaceous portion of the plateau country lying south and southwest of the Rocky mountains. Originally combining a crude agriculture with the chase as means of subsistence, their hard environment tended to limit occupancy to particular

localities in which the water supply, tillable land, and hunting possibilities were such as to serve the needs of small groups but not of large assemblages; so that the interaction of environment produced a scattered but fairly sedentary population, shifting abodes only with seasonal or secular changes in water supply, or with the more lasting exigencies of the chase. Under these conditions there was a strong tendency toward the maintenance of family groups as primary social units, and as nuclei for ideas, arts, and ancillary institutions. After the Spanish invasion, the Navaho acquired horses and sheep, with some other domestic animals, and rapidly became pastoral, and in some measure nomadic to meet the seasonal conditions; yet the impress of widely distributed but sedentary life remained to mold thought and shape daily habit.

A characteristic of the Navaho Indians is the retention of maternal organization in the form of the clan. As explained by Mr Mindeleff, descent is in the female line, while the children and much of the property are regarded as pertaining to the mother. This persistence of the most primitive known form of society is in harmony with the environmental conditions, and attests the deep-rooted conservatism born of sedentary life; it stands in strong contrast to the advanced organization of the roving Kiowa. Yet the Navaho reveal the beginnings of social reconstruction along typical lines. While most of the property, including the sheep and the goats, belongs to the matrons, the larger stock are regarded as the property of the men; i. e., among the Navaho, as among the peoples of the Old World, the possession of herds of such sort as to require strength and vigor for their management led to a transfer of responsibility from the matron to the patriarch. Several other social factors among the Navaho similarly mark the economic transition normally attending the change from maternal to paternal organization; and they are peculiarly significant as affording a well-recorded and practically contemporary example of one of the three great transformations in the course of social development.

Intimately connected with the kinship group of a sedentary people is the family domicil—indeed, among most of the aboriginal tribes of America the domicil reflects the social

organization, as in the Iroquoian long house, the Dakota and Kiowa camping circle, and many other examples. In these and all other known cases the relation between the consanguineal group and the habitation is expressed and perpetuated by devices mainly of mystic or mythologic character. So, among the Navaho, the family domicil is the family temple. It is invested in the minds of the occupants with superphysical attributes in the form of mysterious potencies ever working for or against the interests of the family and clan and tribe; hence the erection and dedication of the house are made fiducial ceremonies, regulated by a ritual embodying the faith of the builders. The Navaho house or hogan is of interest as a type of primitive habitation. It is of far deeper interest as a tangible expression of a primitive faith, and as an example of a widespread domicil cult culminating in the lares and penates of classic history.

ARCHEOLOGICAL EXPEDITION TO ARIZONA IN 1895

Related in habitat and hence in habits to the Navaho, and correspondingly antithetic to the Kiowa, were the prehistoric Pueblo peoples, whose ruins were successfully explored by Dr Fewkes in 1895. The Pueblo peoples, ancient and modern, grew up under hard environment; shadowed ever by the specters of thirst and famine, they were exceptionally impressed by the potencies of pitiless nature and the impotency of their own puny power; and like other desert peoples, seafarers, and risk-haunted folk generally, they developed an elaborate system of ceremonies and symbols designed to placate the mysterious powers. The ruins of the prehistoric settlements abound in relics of the ancient tribesmen and their mystical cult; and the relics are largely interpretable through researches in the modern pueblos.

Occupying an arid region in which water is the most precious of all commodities, the Pueblo peoples early acquired skill in the manufacture of utensils adapted to the conservation of water, and eventually became the potters par excellence of aboriginal America. It was quite in accord, too, with the lines of primitive thought that the fictile ware, representing the

highest product of their genius and handicraft, was raised to high rank in their ceremonial system and made the vehicle of invocatory and thaumaturgic symbolism. Indeed, the strongest motives of Pueblo life, simply economic on the one hand and crudely philosophic on the other, seem to have met and culminated in the fictile art. Accordingly, the characteristics of the prehistoric inhabitants of the Pueblo region appear to be recorded with remarkable completeness in a single class of artifacts—the rich and varied products of their potteries.

The best collections of ancient Pueblo pottery, both in number and quality of specimens, are from ancient mortuaries. This association is especially significant as a revelation of fiducial custom; it indicates that the finest ware was made, not for everyday use but for sacrificial or sacramental purposes, in connection with the always tragic mortality of mankind, just as the finest baskets of the California Indians are made for sacramental burning or burial with the body of the maker; and the evidence of the association is confirmed by that of the contents of dwellings in which the pottery remnants are prevailing of commoner ware. The symbols so abundantly depicted on the mortuary vessels throw light on the features of the faith in which they were conceived; and to some extent they illumine also the industrial and social characteristics of the prehistoric pueblo builders. Accordingly the descriptions and illustrations comprised in Dr Fewkes' memoir constitute a noteworthy contribution to knowledge of one of the most interesting lines of ethnology.

LIST OF PUBLICATIONS OF THE BUREAU OF AMERICAN ETHNOLOGY

(COMPILED BY FREDERICK WEBB HODGE)

ANNUAL REPORTS

First annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1879-'80 by J. W. Powell Director [vignette] Washington Government printing office 1881

Roy. 8°. XXXV, 603 p., 346 fig., 1 map. *Out of print.*

Report of the Director. pp. XI-XXXIII.

On the evolution of language, as exhibited in the specialization of grammatic processes, the differentiation of the parts of speech, and the integration of the sentence; from a study of Indian languages, by J. W. Powell. pp. 1-16.

Sketch of the mythology of the North American Indians, by J. W. Powell. pp. 17-56.

Wyandot government: a short study of tribal society, by J. W. Powell. pp. 57-69.

On limitations to the use of some anthropologic data, by J. W. Powell. pp. 71-86.

A further contribution to the study of the mortuary customs of the North American Indians, by H. C. Yarrow, act. asst. surg., U. S. A. pp. 87-203, figs. 1-47.

Studies in Central American picture-writing, by Edward S. Holden, professor of mathematics, U. S. Naval Observatory. pp. 205-245, figs. 48-60.

Cessions of land by Indian tribes to the United States: illustrated by those in the state of Indiana, by C. C. Royce. pp. 247-262, map.

Sign language among North American Indians compared with that among other peoples and deaf-mutes, by Garrick Mallery. pp. 263-552, figs. 61-346.

Catalogue of linguistic manuscripts in the library of the Bureau of Ethnology, by James C. Pilling. pp. 553-577.

Illustration of the method of recording Indian languages. From the manuscripts of Messrs. J. O. Dorsey, A. S. Gatschet, and S. R. Riggs. pp. 579-589.

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Second annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1880-'81 by J. W. Powell director [vignette] Washington Government printing office 1883 [1884.]

Roy. 8°. XXXVII, 477 p., 77 pl., figs. 1-35, 347-714, 2 maps. *Out of print.*

Report of the Director. pp. XV-XXXVII.

Zuñi fetiches, by Frank Hamilton Cushing. pp. 3-45, pls. I-XI, figs. 1-3.

Myths of the Iroquois, by Erminnie A. Smith. pp. 47-116, pls. XII-XV.

Animal carvings from mounds of the Mississippi valley, by Henry W. Henshaw. pp. 117-166, figs. 4-35.

Navajo silversmiths, by Dr Washington Matthews, U. S. A. pp. 167-178, pls. XVI-XX.

Art in shell of the ancient Americans, by William H. Holmes. pp. 179-305, pls. XXI-LXXVII.

Illustrated catalogue of the collections obtained from the Indians of New Mexico and Arizona in 1879, by James Stevenson. pp. 307-422, figs. 347-697, map.
 Illustrated catalogue of the collections obtained from the Indians of New Mexico in 1880, by James Stevenson. pp. 423-465, figs. 698-714, map.
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Third annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1881-'82 by J. W. Powell director [vignette] Washington Government printing office 1884 [1885.]

Roy. 8°. LXXIV, 606 p., 44 pl., 200 (+1) fig. *Out of print.*

Report of the Director. pp. XIII-LXXIV.

Notes on certain Maya and Mexican manuscripts, by Prof. Cyrus Thomas. pp. 3-65, pls. I-IV, figs. 1-11 (10).

On masks, labrets, and certain aboriginal customs, with an inquiry into the bearing of their geographical distribution, by William Healey Dall, asst. U. S. Coast Survey; honorary curator U. S. National Museum. pp. 67-202, pls. v-XXIX.

Omaha sociology, by Rev. J. Owen Dorsey. pp. 205-370, pls. XXX-XXXIII, figs. 12-42.

Navajo weavers, by Dr Washington Matthews, U. S. A. pp. 371-391, pls. XXIV-XXXVIII, figs. 42 [*sic*] -59.

Prehistoric textile fabrics of the United States, derived from impressions on pottery, by William H. Holmes. pp. 393-425, pl. XXXIX, figs. 60-115.

Illustrated catalogue of a portion of the collections made by the Bureau of Ethnology during the field season of 1881, by William H. Holmes. pp. 427-510, figs. 116-200.

Illustrated catalogue of the collections obtained from the pueblos of Zuñi, New Mexico, and Wolpi, Arizona, in 1881, by James Stevenson. pp. 511-594, pls. XL-XLIV.

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Fourth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1882-'83 by J. W. Powell director [vignette] Washington Government printing office 1886 [1887.]

Roy. 8°. LXIII, 532 p., 83 pl., 564 fig. *Out of print.*

Report of the Director. pp. XXVII-LXIII.

Pictographs of the North American Indians. A preliminary paper, by Garrick Mallery. pp. 3-256, pls. I-LXXXIII, figs. 1-209.

Pottery of the ancient pueblos, by William H. Holmes. pp. 257-360, figs. 210-360.

Ancient pottery of the Mississippi valley, by William H. Holmes. pp. 361-436, figs. 361-463.

Origin and development of form and ornament in ceramic art, by William H. Holmes. pp. 437-465, figs. 464-489.

A study of Pueblo pottery as illustrative of Zuñi culture growth, by Frank Hamilton Cushing. pp. 467-521, figs. 490-564.

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Fifth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1883-'84 by J. W. Powell director [vignette] Washington Government printing office 1887 [1888.]

Roy. 8°. LIII, 560 p., 23 pl., 77 fig. *Out of print.*

Report of the Director. pp. XVII-LIII.

Burial mounds of the northern sections of the United States, by Prof. Cyrus Thomas. pp. 3-119, pls. I-VI, figs. 1-49.

The Cherokee nation of Indians: a narrative of their official relations with the colonial and federal governments, by Charles C. Royce. pp. 121-378, pls. VII-IX. (Pls. VIII and IX are pocket maps.)

The mountain chant: a Navajo ceremony, by Dr Washington Matthews, U. S. A. pp. 379-467, pls. X-XVIII, figs. 50-59.

The Seminole Indians of Florida, by Clay MacCauley. pp. 469-531, pl. XIX, figs. 60-77.

The religious life of the Zuñi child, by Mrs. Tilly E. Stevenson. pp. 533-555, pls. XX-XXIII.

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Sixth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1884-'85 by J. W. Powell director [vignette] Washington Government printing office 1888 [1889.]

Roy. 8°. LVIII, 675 p. (incl. 15 pl. and 6 p. of music), 10 pl. (incl. 2 pocket maps), 546 fig. *Out of print.*

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Ancient art of the province of Chiriqui, Colombia, by William H. Holmes. pp. 3-187, pl. I, figs. 1-285.

A study of the textile art in its relation to the development of form and ornament, by William H. Holmes. pp. 189-252, figs. 286-358.

Aids to the study of the Maya codices, by Prof. Cyrus Thomas. pp. 253-371, figs. 359-388.

Osage traditions, by Rev. J. Owen Dorsey. pp. 373-397, fig. 389.

The central Eskimo, by Dr Franz Boas. pp. 399-669, pls. II-X, figs. 390-546. (Pls. II and III are pocket maps.)

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Seventh annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1885-'86 by J. W. Powell director [vignette] Washington Government printing office 1891 [1892.]

Roy. 8°. XLIII, 409 p., 27 pl. (incl. pocket map), 39 fig. *Out of print.*

Report of the Director. pp. XV-XLI.

Indian linguistic families of America north of Mexico, by J. W. Powell. pp. 1-142, pl. I (pocket map).

The Midē'wiwin or "grand medicine society" of the Ojibwa, by W. J. Hoffman. pp. 143-300, pls. II-XXIII, figs. 1-39.

The sacred formulas of the Cherokees, by James Mooney. pp. 301-397, pls. XXIV-XXVII

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Eighth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1886-'87 by J. W. Powell director [vignette] Washington Government printing office 1891 [1893.]

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A study of Pueblo architecture: Tusayan and Cibola, by Victor Mindeleff. pp. 3-228, pls. I-CXI, figs. 1-114.

Ceremonial of Hasjelti Dailjis and mythical sand painting of the Navajo Indians, by James Stevenson. pp. 229-285, pls. CXII-CXXIII, figs. 115-118.

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Ninth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1887-'88 by J. W. Powell director [vignette] Washington Government printing office 1892 [1893.]

Roy. 8°. XLVI, 617 p., 8 pl., 448 fig. *Out of print.*

Report of the Director. pp. XIX-XLVI.

Ethnological results of the Point Barrow expedition, by John Murdoch, naturalist and observer, International polar expedition to Point Barrow, Alaska, 1881-1883. pp. 3-441, pls. I-II, figs. 1-428.

The medicine-men of the Apache, by John G. Bourke, captain, third cavalry, U. S. army. pp. 443-603, pls. III-VIII, figs. 429-448.

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Tenth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1888-'89 by J. W. Powell director [vignette] Washington Government printing office 1893 [1894.]

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Picture-writing of the American Indians, by Garrick Mallery. pp. 3-807, pls. I-LIV, figs. 1-1290.

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Roy. 8°. XLVII, 553 p., 50 pl., 200 fig. *Out of print.*

Report of the Director. pp. XXII-XLVII.

The Sia, by Matilda Coxe Stevenson. pp. 3-157, pls. I-XXXV, figs. 1-20.

Ethnology of the Ungava district, Hudson Bay territory, by Lucien M. Turner. Edited by John Murdoch. pp. 159-350, pls. XXXVI-XLIII, figs. 21-155.

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Twelfth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1890-'91 by J. W. Powell director [vignette] Washington Government printing office 1894

Roy. 8°. XLVIII, 742 p., 42 pl., 344 fig. *Out of print.*

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Report on the mound explorations of the Bureau of Ethnology, by Cyrus Thomas. pp. 3-730, pls. I-XLII, figs. 1-344.

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Thirteenth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1891-'92 by J. W. Powell director [vignette] Washington Government printing office 1896

Roy. 8°. LIX, 462 p., 60 pl., 330 fig. *Out of print.*

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Prehistoric textile art of eastern United States, by William H. Holmes. pp. 3-46, pls. I-IX, figs. 1-28.

Stone art, by Gerard Fowke. pp. 47-178, figs. 29-278.

Aboriginal remains in Verde valley, Arizona, by Cosmos Mindeleff. pp. 179-261, pls. X-L, figs. 279-305.

Omaha dwellings, furniture, and implements, by James Owen Dorsey. pp. 263-288, figs. 306-327.
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Fourteenth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1892-'93 by J. W. Powell director In two parts Part 1 [-part 2] [vignette] Washington Government printing office 1896 [1897.]

Roy. 8°. two parts, LXI, 1-637; 639-1136 p., 122 pl., 104 fig. *Out of print.*

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Fifteenth annual report of the Bureau of Ethnology to the secretary of the Smithsonian institution 1893-'94 by J. W. Powell director [vignette] Washington Government printing office 1897

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director In two parts Part 1 [-part 2] [vignette] Washington Government printing office 1898 [1900]

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Eighteenth annual report of the Bureau of American Ethnology to the secretary of the Smithsonian institution 1896-97 by J. W. Powell director In two parts Part 1 [-part 2] [vignette] Washington Government printing office 1899 *In press.*

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The Eskimo about Bering strait, by Edward William Nelson. pp. 3-518, pls. I-CVII, figs. 1-165.

Indian land cessions in the United States, compiled by Charles C. Royce, with an introduction by Cyrus Thomas. pp. 521-964, pls. CVIII-CLXXIV.

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Nineteenth annual report of the Bureau of American Ethnology to the secretary of the Smithsonian institution 1897-98 by J. W. Powell director In two parts Part 1 [-part 2] [vignette] Washington Government printing office 1900 *In preparation.*

BULLETINS

(A=1). Bibliography of the Eskimo language by James Constantine Pilling 1887

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(B=2). Perforated stones from California by Henry W. Henshaw 1887

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(C=3). The use of gold and other metals among the ancient inhabitants of Chiriqui, Isthmus of Darien by William H. Holmes 1887

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(D=4). Work in mound exploration of the Bureau of Ethnology by Cyrus Thomas 1887

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(E=5). Bibliography of the Siouan languages by James Constantine Pilling 1887

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(F=6). Bibliography of the Iroquoian languages by James Constantine Pilling 1888 [1889] *Out of print.*

8°. VI, 208 p. (incl. 4 p. facsimiles), 5 unnumbered facsimiles.

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- (H=8). The problem of the Ohio mounds by Cyrus Thomas 1889
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- (I=9). Bibliography of the Muskogean languages by James Constantine Pilling 1889 *Out of print*.
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- (K=11). Omaha and Ponka letters by James Owen Dorsey 1891
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- (L=12). Catalogue of prehistoric works east of the Rocky mountains by Cyrus Thomas 1891
8°. 246 p., 17 pl. and maps.
- (M=13). Bibliography of the Algonquian languages by James Constantine Pilling 1891 [1892]
8°. x, 614 p., 82 facsimiles.
- (N=14). Bibliography of the Athapascan languages by James Constantine Pilling 1892
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8°. XIII, 86 p. (incl. 4 p. facsimiles).
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8°. 80 p., 17 fig.

(X=24). List of the publications of the Bureau of Ethnology with index to authors and subjects by Frederick Webb Hodge 1894 *Out of print.*

8°. 25 p.

CONTRIBUTIONS TO NORTH AMERICAN ETHNOLOGY

(All of the volumes of this series are out of print)

Department of the Interior U. S. geographical and geological survey of the Rocky mountain region J. W. Powell in charge—Contributions to North American ethnology volume I [–VII, IX]—[seal of the department] Washington Government printing office 1877 [–1893.]

4°. 9 vols.

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The Klamath Indians of southwestern Oregon, by Albert Samuel Gatschet. 2 pts.—cvii, 711 p., map; iii, 711 p.

VOLUME III, 1877:

Tribes of California, by Stephen Powers. 635 p., 1 pl., 44 fig., 3 p. music, pocket map.

Appendix [Linguistics], edited by J. W. Powell. pp. 439–613.

VOLUME IV, 1881:

Houses and house-life of the American aborigines, by Lewis H. Morgan. xiv, 281 p., 57 pl. and fig.

VOLUME V, 1881:

Observations on cup-shaped and other lapidarian sculptures in the old world and in America, by Charles Rau. [1882.] 112 p., 61 fig.

On prehistoric trephining and cranial amulets, by Robert Fletcher, M. R. C. S. Eng. Act. asst. surgeon U. S. army. [1882.] 32 p., 9 pl., 2 fig.

A study of the manuscript Troano, by Cyrus Thomas Ph. D. with an introduction by D. G. Brinton M. D. [1882.] xxxvii, 237 p., 9 pl., 101 fig.

VOLUME VI, 1890 [1892]:

The Cegiha language, by James Owen Dorsey. xviii, 794 p.

VOLUME VII, 1890 [1892]:

A Dakota-English dictionary, by Stephen Return Riggs, edited by James Owen Dorsey. x, 665 p.

VOLUME VIII:

[NOTE—As announced in the List of Publications issued as Bulletin x=24, it was the intention to publish Professor Holmes' memoir on "Pottery of Eastern United States" as Volume VIII of the *Contributions*, but as the act of January 12, 1895, failed to provide for the completion of this series, the eighth volume will not be published.]

VOLUME IX, 1893:

Dakota grammar, texts and ethnography, by S. R. Riggs, edited by James Owen Dorsey. xxxii, 239 p.

INTRODUCTIONS

(All of the volumes of this series are out of print)

(1). Introduction to the study of Indian languages, with words, phrases, and sentences to be collected. By J. W. Powell. [Seal of the Department of the Interior.] Washington: Government printing office. 1877.

4°. 104 p., 10 blank leaves.

Second edition as follows:

(2). Smithsonian institution—Bureau of Ethnology J. W. Powell, director—Introduction to the study of Indian languages with words, phrases and sentences to be collected—By J. W. Powell—Second edition—with charts—Washington Government printing office 1880

4°. xi, 228 p., 10 blank leaves, kinship charts I-IV in pocket. A 16° "alphabet" of 2 leaves accompanies the work.

(3). Smithsonian institution—Bureau of Ethnology—Introduction to the study of sign language among the North American Indians as illustrating the gesture speech of mankind—by Garrick Mallery, brevet lieut. col., U. S. army—Washington Government printing office 1880

4°. iv, 72 p., 33 unnumbered figs.

(4). Smithsonian institution—Bureau of Ethnology J. W. Powell, director—Introduction to the study of mortuary customs among the North American Indians—By Dr. H. C. Yarrow act. asst. surg., U. S. A.—Washington Government printing office 1880

4°. ix, 114 p.

MISCELLANEOUS PUBLICATIONS

(All of the works in this series are out of print)

(1). Smithsonian institution—Bureau of Ethnology J. W. Powell, director—A collection of gesture-signs and signals of the North American Indians with some comparisons by Garrick Mallery. Brevet lieut. col. and formerly acting chief signal officer, U. S. army—Distributed only to collaborators—Washington Government printing office 1880

4°. 329 p.

NOTE—250 copies printed for use of collaborators only.

(2). Smithsonian institution—Bureau of Ethnology J. W. Powell director—Proof sheets of a bibliography of the languages of the North American Indians by James Constantine Pilling—(Distributed only to collaborators)—Washington Government printing office 1885

4°. XL, 1135 p., 29 pl. (facsimiles).

NOTE—Only 110 copies printed for the use of collaborators, 10 of them on one side of the sheet.

It was the intention to have this Bibliography form Volume x of “Contributions to North American Ethnology,” but the work assumed such proportions that it was subsequently deemed advisable to publish it as a part of the series of Bulletins, devoting a Bulletin to each linguistic stock.

(3). [Linguistic families of the Indian tribes north of Mexico with provisional list of the principal tribal names and synonyms.]

16°. 55 p.

NOTE—A few copies printed in 1885 for the use of the compilers of an Indian Cyclopaedia and Synonymy now in preparation. It is without title-page, name, or date, but was compiled from a manuscript list of Indian tribes by James Mooney.

(4). [Map of] Linguistic stocks of American Indians north of Mexico by J. W. Powell. [1891.]

NOTE—A limited edition of this map, which forms plate I of the Seventh Annual Report, was issued on heavy paper, 19 by 22 inches, for the use of students.

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THE SERI INDIANS

BY

W. J. MCGEE

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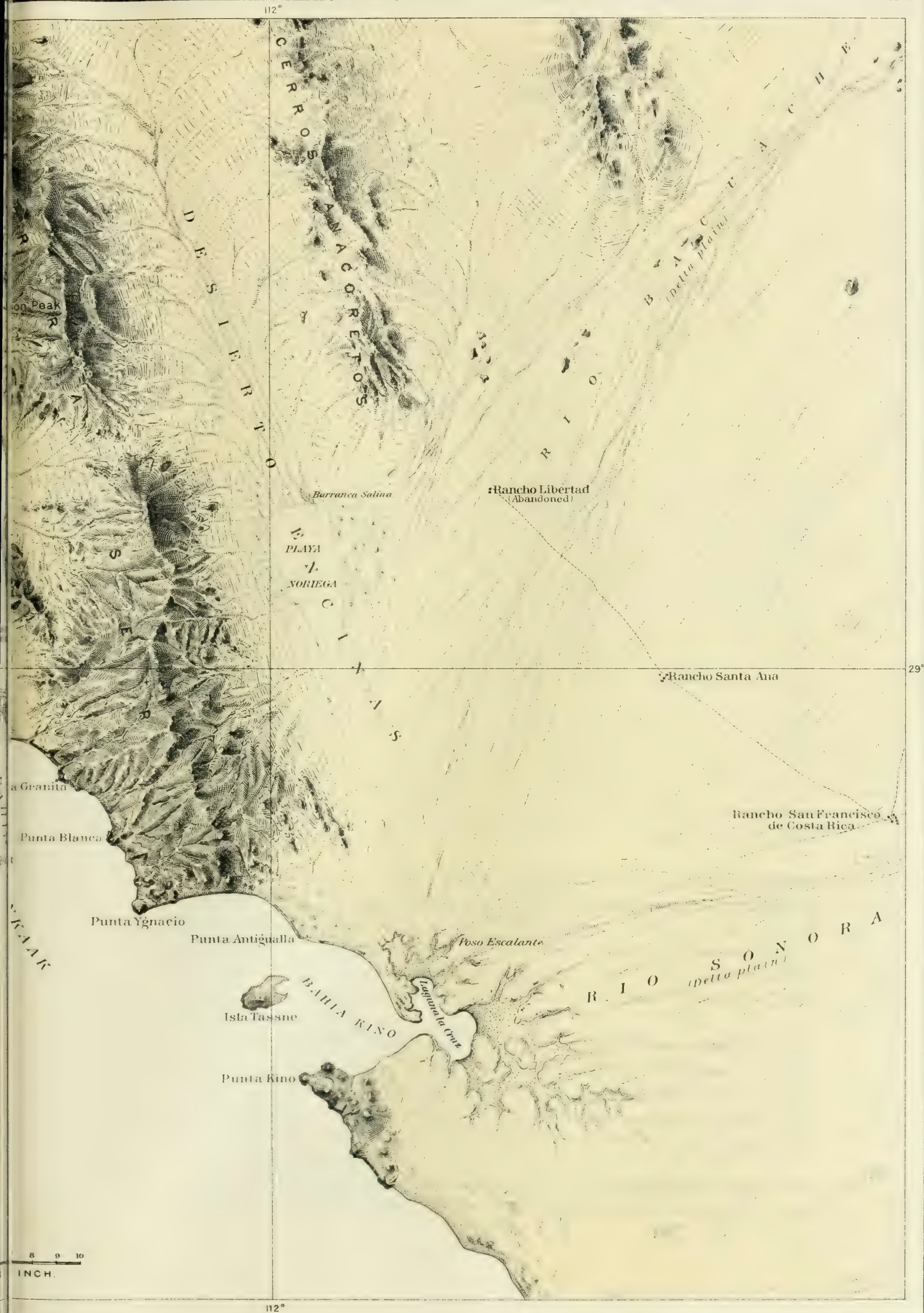
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W. D. Johnson, Topographer

SER



W. J. McGee, Ethnologist in Charge

LAND

THE SERI INDIANS

By W. J. MCGEE

INTRODUCTION

SALIENT FEATURES

Something has been known of the Seri Indians (Seris, Ceris, Ceres, Heris, Tiburones) since the time of Coronado, yet they remain one of the least-studied tribes of North America. The first systematic investigation of the tribe was made in the course of expeditions by the Bureau of American Ethnology in 1894 and 1895; it was far from complete.

The Seri Indians are a distinctive tribe in habits, customs, and language, inhabiting Tiburon island in Gulf of California and a limited adjacent area on the mainland of Sonora (Mexico). They call themselves *Kun-kaak* or *Kmike*: their common appellation is from the Opata, and may be translated "spry". Their habitat is arid and rugged, consisting chiefly of desert sands and naked mountain rocks, with permanent fresh water in only two or three places; it is barred from settled Sonora by a nearly impassable desert. Two centuries ago the population of the tribe was estimated at several thousands, but it has been gradually reduced by almost constant warfare to barely three hundred and fifty, of whom not more than seventy-five are adult males, or warriors.

The Seri men and women are of splendid physique; they have fine chests, with slender but sinewy limbs, though the hands and especially the feet are large; their heads, while small in relation to stature, approach the average in size; the hair is luxuriant and coarse, ranging from typical black to tawny in color, and is worn long. They are notably vigorous in movement, erect in carriage, and remarkable for fleetness and endurance.

The Seri subsist chiefly on turtles, fish, mollusks, water-fowl, and other food of the sea; they also take land game, and consume cactus fruits, mesquite beans, and a few other vegetal products of their sterile domain. Most of their food is eaten raw. They neither plant nor cultivate, and are without domestic animals, save dogs which are largely of coyote blood.

The habitations of the Seri are flimsy bowers of cactus and shrubbery, sometimes shingled rudely with turtle-shells and sponges; in some

cases these are in clusters pertaining to matronymic family groups; in other cases they are isolated, and are then often abandoned and reoccupied repeatedly, and are apparently common property of the tribe. The habitations afford some protection from sun and wind, but not from cold and wet, which are hardly known in winterless and nearly rainless Seriland.

The Seri clothing consists essentially of a kilt or skirt extending from waist to knees; sometimes a pelican-skin robe is worn as a blanket or mantle, and used also as bedding; the head and feet, as well as the bust and arms, are habitually bare, though a loose-sleeved wammus reaching not quite to the waist is sometimes worn. These garments were formerly woven of coarse threads or cords made from native vegetal fibers; the belt is generally of twisted human hair, of horse hair, of dressed deerskin, or of snake skin; the robe consists of four, six, or eight pelican skins sewed together with sinew. The pelican-skin robes are still used, though the aboriginal fabric is commonly replaced by cotton stuffs obtained through barter or plunder. Cords of human hair and skins of serpents are used for necklaces.

The sports and games of the Seri Indians include racing and dancing, and there are ceremonial dances at the girls' puberty feasts, accompanying the rude music of improvised drums. Decoration is ordinarily limited to symbolic face-painting, which is seen especially among the females, and to crude ornamentation of the scanty apparel. A peculiar pottery is manufactured, and the pieces are sometimes decorated with simple designs in plain colors.

The bow and arrow are habitually used, especially in warfare, and turtles and fish are taken by means of harpoons, shafted with cane and usually tipped with bone, charred wood, or flotsam metal. The arrows are sometimes provided with chipped stone points, though the art of chipping seems to be accultural and shamanistic. The ordinary stone implements are used for crushing bone and severing sinew or flesh, and also for mulling seeds and other food substances; they are mere cobbles, selected for fitness, and retained only if their fitness is increased by the wear of use, after the manner of protolithic culture. Graceful balsas are made from canes, bound together with mesquite-fiber cords; and on these the people freely navigate the narrow but stormy strait separating Tiburon and the neighboring islets from the mainland. They make a distinctive pottery, which is remarkably light and fragile. Its chief use is carrying water to habitations (always located miles from the spring or tinaja) or on desultory wanderings. Shells are used for cups, and to some extent for implements. They have a few baskets, which are not greatly different from those made by neighboring tribes.

The modern Seri are loosely organized in a number of maternal groups or clans, which are notable for the prominence given to mother-right in marriage and for some other customs; and there are indications that the clan organization was more definite before the tribe was so

greatly reduced. The leading clans are those of the Pelican, the chief tribal tutelary, and the Turtle, a minor tutelary. At present polygyny prevails, professedly and evidently because of the preponderance of females due to the decimation of warriors in battle; but both custom and tradition tell of former monogamy, with a suggestion of polyandry. The primary marriage is negotiated between the mothers of the would-be groom and the prospective bride; if the mother and daughter in the latter family look with favor on the proposal, the candidate is subjected to rigorous tests of material and moral character; and if these are successfully passed the marriage is considered complete, and the husband becomes a privileged and permanent guest in the wife's household. Family feeling, especially maternal affection, is strong; but petty dissensions are common save when internal peace is constrained by external strife. The strongest tribal characteristic is implacable animosity toward aliens, whether Indian or Caucasian; certainly for three and a half centuries, and probably for many more, the Seri have been almost constantly on the warpath against one alien group or another, and have successfully stayed Spanish, Mexican, and American invasion. In their estimation the brightest virtue is the shedding of alien blood, while the blackest crime in their calendar is alien conjugal union.

The Seri vocabulary is meager and essentially local; the kinship terms are strikingly scanty, and there are fairly full designations for food materials and other local things, while abstract terms are few. Two or three recorded vocables seem to resemble those of the Yuman languages, while the numerals and all other known terms are distinct. The grammatic construction of Seri speech appears not to differ greatly from that of other tongues of Sonora and Arizona; it is highly complex and associative. The speech is fairly euphonious, much more so than that of the neighboring Papago and Yaqui Indians.

The Seri Indians appear to recognize a wide variety of mystical potencies and a number of zoic deities, all of rather limited powers. The Pelican, Turtle, Moon, and Sun seem to lead their thearchy. Creation is ascribed to the Ancient of Pelicans—a mythical bird of marvelous wisdom and melodious song—who first raised Isla Tassne, and afterward Tiburon and the rest of the world, above the primeval waters. Individual fetishes are used, and there is some annual ceremony at the time of ripening of cactus fruits, and certain observances at the time of the new moon. The most conspicuous ceremony is the girls' puberty feast. The dead are clothed in their finest raiment, folded and fastened in small compass like Peruvian mummies, placed in shallow graves, and covered with turtle-shells, when the graves are filled with earth and heaped with stones or thorny brambles for protection against beasts of prey. Fetishes, weapons, and other personal belongings are buried with the body, as well as a dish of food and an olla of water, and there are curious customs connected with the place of

sepulture. There is a weird, formal mourning for dead matrons, and suggestions of fear of or veneration for the manes.

Seriland is surrounded with prehistoric works, telling of a numerous population who successfully controlled the scant waters for irrigation, built villages and temples and fortresses, cultivated crops, kept domestic animals, and manufactured superior fictile and textile wares; but (save possibly in one spot) these records of aboriginal culture cease at the borders of Seriland. In their stead a few slightly worn pebbles and bits of pottery are found here and there, deeply embedded in the soil and weathered as by the suns of ages. There are also a few cairns of cobbles marking the burial places, and at least one cobble mound of striking dimensions but of unknown meaning; and there are a few shell-mounds, one so broad and high as to form a cape in the slowly transgressing shoreline (Punta Antigualla), and in which the protolithic implements and other relics are alike from the house-dotted surface to the tide level, 90 feet below.

The absence of relics of a superior culture, and the presence of Seri relics throughout deposits of high antiquity, suggest that the tribe is indigenous to Seriland; and this indication harmonizes with the peculiar isolation of the territory, the lowly culture and warlike habits of the people, the essentially distinct language, the singular marriage custom, and the local character of the beast-gods. And all these features combine to mark the Seri as children of the soil, or autochthones.

RECENT EXPLORATIONS AND SURVEYS

Present knowledge of Seriland and its inhabitants is based primarily on the work of two expeditions by the Bureau of American Ethnology, conducted in 1894 and 1895, respectively; and, secondarily, on researches into the cartography and literature (descriptive, historical, and scientific) of the region. Both of the expeditions were projected largely for the purpose of making collections among little-known native tribes in the interests of the National Museum, and the general ethnologic inquiries were ancillary to this purpose.

The 1894 expedition was directed chiefly toward work among the Papago Indians in the vaguely defined territory known as Papaguera, lying south of Gila river and west of the Sierra Madre in southwestern Arizona and western Sonora (Mexico). Outfitting at Tucson early in October, the party moved southward, visiting the known Papago rancherias and seeking others, and thus defining the eastern limits of the Papago country. On the approach to the southern limits of the tribal range toward Rio Sonora, the evil repute of the Seri Indians sounded larger and larger, suggesting the desirability of scientific study of the tribe; and it was decided to attempt investigation. Accordingly the party was reorganized at Hermosillo, and, with the sanction of the Secretary of State and Acting Governor, Señor Don Ramón Corral, proceeded to Rancho San Francisco de Costa Rica,



PASCUAL ENCINAS, CONQUEROR OF THE SERI

where a temporary Seri rancheria was found occupied by about sixty of the tribe, including subchief Mashém, who speaks Spanish. In this part of the work the expedition was accompanied by Señor Pascual Encinas, the owner of the rancho visited, and doubtless the best informed white man concerning the habits, customs, personnel, and habitat of the tribe. About a week was spent in intercourse with the occupants of the rancheria, when the studies were brought to an end through the illness of Señor Encinas, and the consequent necessity for return to Hermosillo. The expedition then proceeded northwestward and northward along a route so laid as to define the western limits of Papagueria proper, and reached Tucson near the end of the year. In addition to the leader, the party comprised Mr William Dinwiddie, photographer; José Lewis, Papago interpreter, and E. P. Cunningham, teamster. The outfit was furnished chiefly by Mr J. M. Berger, of San Xavier (near Tucson). On the visit to the Seri frontier the party was accompanied by Señor Encinas, Don Arturo Alvemar-Leon (who acted as Spanish interpreter), and two or three attachés of Molino del Encinas.¹

The second expedition was directed primarily toward investigation of the Seri, and only incidentally to continuation of the researches among the Papago. Outfitting at Tucson in October (again with the aid of Mr Berger), the expedition proceeded southward by a route different from those previously traversed, and carried forward a plane-table route survey covering a considerable zone from the international boundary at Sasabe to Rio Sonora. Descending the previously unmapped course of Rio Bacuache, the expedition reached the Rancho de San Francisco de Costa Rica on December 1, 1895, and, although conditions were found unfavorable in that the Seri were on the warpath, immediately prepared for the extension of the work into Seriland.

A preliminary trip was made into the mainland portion of the Seri habitat, terminating at the crest of Johnson peak, the highest point in Sierra Seri. The triangulation and topographic surveys were carried over the territory traversed, and several points were fixed on Isla Tiburon; but the natives, agitated by a skirmish with vaqueros on the frontier a day or two earlier, had withdrawn to remoter parts of the territory, and were not encountered. The party returned to Costa Rica, a rude boat was completed, transported across the desert via Pozo Escalante to Embarcadero Andrade, and launched in Bahia Kunkaak. The surveys were extended to the southern portion of Sierra Seri and Isla Tassne, and, after various difficulties and delays due to dearth of fresh water, to gales, and to other causes, the party (enlarged for the purpose) finally landed on Tiburon. Many Seri rancherias were found on

¹ The more noteworthy details of the organization and work of the two expeditions are set forth in the administrative reports of the Bureau for the fiscal years 1894-95 and 1895-96. Certain members of this party are shown in the accompanying half-tone, forming plate II: Señor Encinas seated at the end of the table; his son, Don Manuel (bareheaded), and Don Ygnacio Lozania at his right; a grandson behind him, and Señor Alvemar-Leon seated at his left, with Mashém kneeling over the table in the foreground.

both sides of Bahia Kunkaak and El Infiernillo. Some of these had been occupied almost to the hour of the visit, but the occupants had taken flight, leaving most of their unattached possessions behind, and were not seen, though it was evident that, like wary birds and game animals, they kept the invaders in sight from points of vantage and hidden lairs. The eastern scarps and foot-slopes of Sierra Kunkaak were traversed extensively and repeatedly; its crest was crossed by Mr Johnson with a small party at a point west of Punta Narragansett, and the triangulation and topographic sketching were connected with the work on the mainland and carried over practically the entire surface of the island, being tied to the work of the Hydrographic Office about the coasts. Then, despairing of finding the wary natives, and having exhausted food supplies, the party returned to the mainland and thence to Costa Rica, arriving in the evening of December 31.

The original party comprised, in addition to the leader, Mr Willard D. Johnson, topographer; Mr J. W. Mitchell, photographer; Hugh Norris, Papago interpreter, and José Contrares, teamster. The party engaged in the expedition to Sierra Seri comprised the leader, Messrs Johnson and Mitchell, Mr L. K. Thompson of Hermosillo, Don Andrés Noriega of Costa Rica, José Contrares, and two Papago Indian guards, Miguel and Anton, of Costa Rica. The Tiburon party was made up of the leader, Messrs Johnson and Mitchell, S. C. Millard of Los Angeles, and Señores Andrés Noriega and Ygnacio Lozania, together with Ruperto Alvarez, a Yaqui Indian guard, and Miguel, Anton, Mariana, Anton Ortiz, and Anton Castillo, Papago guards; while Hugh Norris and José Contrares, with half a dozen Papago guards and other attachés of the rancho at Costa Rica, maintained an intermittent supply station at Embarcadero Andrade. Señor Encinas cooperated in the work of the expedition, part of the time at Costa Rica and part at Molino del Encinas, his principal hacienda in the outskirts of Hermosillo; while Mr Thompson and Dr W. J. Lyons aided in the work, the former at both Hermosillo and Costa Rica and the latter at Hermosillo.

The return trip from Costa Rica lay via Hermosillo, and permitted the extension of the plane-table surveys to this longitude. While at the city advantage was taken of the opportunity to obtain linguistic and other data from "El General" Kolusio, a full-blood Seri retained at the capital by the State for occasional duty as a Seri interpreter, who was obligingly assigned to the service of the party by Señor Don Ramón Corral, then governor of Sonora. At Hermosillo the leader of the expedition left the main party, which then proceeded northwestward and northward along the route followed by the 1894 expedition on the return journey, the party comprising Mr Johnson, in charge, with Messrs Mitchell and Millard, Hugh Norris, and José Contrares; and the plane-table surveys were continued and combined with the route surveys made on the outward journey.

The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians.

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.¹

The following list of place-names is designed primarily to give the meaning and *raison d'être* of the nomenclature; with a single exception,² the names are Hispanized or Mexicanized in accordance with local usage.

*Nomenclature of Seriland.*³

* SERILAND: Extra-vernacular name of tribe, with English locative.

MAR DE CORTÉS (Sea of Cortés=Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

* PASAJE ULLOA (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

* ESTRECHO ALARCON (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

EL INFIERNILLO (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infiernillo" on larger map).

† BOCA INFIERNO (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

* BAHIA KUNKAAC (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

¹The larger map was drawn early in 1896, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1896. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1900.

²Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

³An asterisk indicates new names, an obelisk old names restored or colloquial names adopted.

- BAHIA KINO (Kino bay): Long-standing name given in honor of Padre Eusebio Francisco Kino, an early Jesuit missionary (the "Bahia San Juan Bautista" of various early maps); adopted in Anglicized form by the Hydrographic Office, U. S. N.
- †BAHIA TEPOPA (Tepopa bay): Specific a corruption of Tepoka, the extra-vernacular name of a local tribe related to the Seri; applied in 1746 by Padre Consag, and used by most navigators and cartographers of later dates, though it does not appear on the charts of the Hydrographic Office, U. S. N.
- BAHIA AGUA DULCE (Freshwater bay): Named by Lieutenant R. W. H. Hardy, R. N., 1826; name retained (in Anglicized form) by Hydrographic Office, U. S. N. (The name is misplaced on Hardy's map, but the bay is correctly located in his text, p. 293.)
- †BAHIA BRUJA (Witch bay): Named (in honor of his vessel) by its discoverer, Lieutenant Hardy, 1826.
- *BAHIA ESPENCE (Spence bay): Named in honor of Pilot Tomás Espence (Thomas Spence), second circumnavigator of the island, who landed in the bay in 1844.
- †ESTERO COCHLA (Cockle inlet): Named by Lieutenant Hardy, 1826.
- *BAJIOS DE UGARTE (Ugarte shoals): Named in honor of Padre Juan de Ugarte, first visitor to the shoals and circumnavigator of Tiburon, 1721.
- *RADA BALLEÑA (Whale roadstead): Named from the stranding of a whale about 1887, an incident of much note among the Seri.
- *ANCLAJE DEWEY (Dewey anchorage): Named in honor of its discoverer, Commander (now Admiral) George Dewey, in charge of the surveys by the Hydrographic Office, U. S. N., 1873.
- LAGUNA LA CRUZ (Lagoon of the Cross): Name adopted (Anglicized) by Hydrographic Office, U. S. N.; the "Laguna de los Cercaditos" (Lagoon of the Little Banks) of Colonel Francisco Andrade, 1844.
- ISLA TIBURON (Shark island): Name of long standing; used alternatively with "Isla San Agustin" since the seventeenth century, both names being apparently applied to Isla Tassne by several writers, and also to Isla Angel de la Guarda (the second largest island in the gulf) by Kino and others, while the present Tiburon was regarded as a peninsula.
- ISLA SAN ESTEBAN (Saint Stephen island): Name of long standing; in consistent use since early in the seventeenth century.
- *ISLA TASSNE (Pelican island): Name recast by the use of the Seri specific in lieu of the Spanish (Alcatraz), which is too hackneyed for distinctive use.
- ISLA TURNER (Turner island): Name used (and probably applied in honor of Rear-Admiral Thomas Turner, U. S. N.) by the Hydrographic Office, U. S. N.
- ISLA PATOS (Duck island—i. e., Island of Ducks): Name of long standing; adopted by the Hydrographic Office, U. S. N.
- ROCA FOCA (Seal rock): Name used (and probably applied) by the Hydrographic Office, U. S. N.
- PEÑA BLANCA (White crag): Name used (and probably applied) by the Hydrographic Office, U. S. N.
- PUNTA TEPOPA (Tepopa point): Named (probably corruptly) from a local tribe related to the Seri; used by the Hydrographic Office, U. S. N.
- PUNTA SARGENT (Sargent point): Name applied by Lieutenant Hardy in 1826 to what is now known as Punta Tepopa; adopted for the minor point by the Hydrographic Office, U. S. N.
- *PUNTA PERLA (Pearl point): Name applied in commemoration of the traditional pearl fisheries of the vicinity.
- *PUNTA ARENA (Sand point): A descriptive designation.
- *PUNTA TORTUGA (Turtle point): Name applied in recognition of the extensive turtle fisheries of the Seri in the vicinity.

- * PUNTA TORMENTA (Hurricane point): Name applied in recognition of the nearly continuous gales and tide-rips by which navigation is rendered hazardous, and by which the long sand-spit has been built.
- PUNTA MIGUEL (Miguel point): Recast from "San Miguel point", partly through association with the name of a Papago guard accompanying the expedition of 1895; in the old form the name is of long standing, was probably applied by Escalante in 1700, and was adopted by the Hydrographic Office, U. S. N., 1873.
- * PUNTA GRANITA (Granite point): A descriptive designation.
- * PUNTA BLANCA (White point): A descriptive designation.
- * PUNTA NARRAGANSETT (Narragansett point): Specific (of Algonquian Indian derivation) applied in commemoration of the vessel employed in the surveys by the Hydrographic Office, U. S. N., in 1873, the point being that at which the commander of the *Narragansett* located the principal Seri rancheria of that time and made observations on the tribe.
- * PUNTA YGNACIO (Ygnacio point): Specific applied in honor of Don Ygnacio Lozania, a trusted aid in the 1895 expedition, who had visited this point in connection with the Andrade expedition of 1844; described as "Dark bluff" on charts of the Hydrographic Office, U. S. N.
- * PUNTA ANTIGUALLA (Antiquity point—i. e., Point of Antiquities): Name applied in recognition of a great shell-mound which has retarded the transgression of the sea and produced the point.
- PUNTA KINO (Kino point): Name of long standing; specific in honor of the early missionary; used by the Hydrographic Office, U. S. N.
- * PUNTA MASHÉM (Mashém point): Specific in honor of the Seri chief Mashém (sometimes called Francisco Estorga or Juan Estorga), who speaks Spanish and acted as Seri-Spanish interpreter in 1894.
- PUNTA MONUMENTA (Monument point): Named by the Hydrographic Office, U. S. N.
- PUNTA COLORADA (Red point): Recast from the "Red Bluff point" of the Hydrographic Office, U. S. N.
- PUNTA WILLARD (Willard point): Origin of name unknown; used by the Hydrographic Office, U. S. N.
- * EMBARCADERO ANDRADE (Andrade landing): Named in memory of the embarkation for Tiburon of Colonel Francisco Andrade, 1844.
- * CAMPO NAVIDAD (Christmas camp): Named in memory of a camp occupied December 24–26 by the expedition of 1895.
- * SIERRA SERI (Seri range): Generic Spanish, specific the extra-vernacular tribe name.
- * SIERRA KUNKAAC (Kunkaak range): Specific the vernacular tribe name.
- * SIERRA MENOR (Minor range): A descriptive designation.
- * CERROS ANACORETOS (Anchorite hills): A designation suggested to Topographer Johnson by the solitary series of spurs rising singly or in scattered groups from the sheetflood-carved desert plain.
- * JOHNSON PEAK: Name applied in commemoration of the first and only ascent of the peak, and of its occupation as a survey station, December 7 and 8, 1895, by Willard D. Johnson, accompanied by John Walter Mitchell and Miguel (Papago Indian).
- * DESIERTO ENCINAS (Encinas desert): Generic Spanish, specific in honor of the intrepid settler on the outskirts of the desert, Señor Pascual Encinas.
- * PLAYA NORIEGA (Noriega playa): Generic Spanish, specific in honor of Don Andrés Noriega, kinsman of Señora Anita Encinas, a resident on the outskirts of the desert, and the leading Mexican aid in the expedition of 1895.
- * ARENALES DE GIL (Gil sandbanks): Generic Spanish, specific in honor of Fray Juan Crisóstomo Gil de Bernabe, sole missionary to Seriland, massacred at this point in 1773.
- * RIO SONORA (Sonora river): Generic Spanish, specific a long standing and originally colloquial corruption of Señora, a designation said to have been applied

by Spanish pioneers to a hospitable native chieftainess; afterwards apparently fixed through the name of an early mining camp and garrison and perhaps by similarity to a local aboriginal (Opata) term connoting maize, i. e., *sonot*.

RIO BACUACHE (Bacuache river): Name of long standing; specific doubtless from the Opata term *bacot*, "snake", with a locative termination, i. e., "Snake place".

†ARROYO CARRIZAL (Reedy arroyo): Generic and specific Spanish; colloquial designation used by the Seri chief Mashém in describing the island; a traditional name of long standing.

†ARROYO AGUA DULCE (Freshwater arroyo): A traditional name like the former, also used by Mashém.

*ARROYO MILLARD (Millard arroyo): Named in memory of S. C. Millard, aid and interpreter in the expedition of 1895 (died 1897).

*ARROYO MARIANA (Mariana arroyo): Named in honor of Mariana (Papago Indian), a guard accompanying the 1895 expedition, who had once approached this arroyo on a hunting expedition.

*ARROYO MITCHELL (Mitchell arroyo): Named in honor of John Walter Mitchell, photographer of the 1895 expedition.

†POZO ESCALANTE (Escalante well): Generic Spanish, specific in honor of Sergeant Juan Bautista de Escalante, the first Caucasian to cross El Infiernillo (in 1700), who is reputed to have dug the shallow well still existing; the name has been retained ever since alternatively with "Agua Amarilla" (Yellow water); doubtless the "Carrizal" of certain early maps; the site of the only mission ever established in Seriland, and of the massacre of Fray Crisóstomo Gil in 1773.

*POZO HARDY (Hardy well): Named in honor of Lieutenant R. W. H. Hardy, R. N., second known Caucasian visitor to the spot, 1826.

*AGUAJE ANTON (Anton water, or water-hole): Generic a common Mexican term; specific applied in memory of Anton (Papago Indian), a guard and visitor to the spot in the expedition of 1895.

*AGUAJE PARILLA (Parilla water): A traditional water (not found by the expedition of 1895) named in memory of Colonel Diego Ortiz Parilla, the vaunted destroyer of the Seri in 1749, whose imposing expedition may have reached this point.

*BARRANCA SALINA (Saline gorge): Generic colloquial Mexican, specific denoting the character of the practically permanent water; the designation applied by Mexican vaqueros and Papago hunters, who occasionally visit the locality.

*TINAJA ANITA (Anita basin): Generic a useful Mexican term for a water-pocket, or rock basin containing water supplied by storms or seepage; specific a tribute to Anita Newcomb McGee, M. D., Actg. Asst. Surg. U. S. A.; perhaps the "Aguaje de Andrade" of 1844.

*TINAJA TRINCHERA (Entrenched basin): Specific a common Mexican term for the ancient entrenchments found on many mountains of Papagueria; applied in recognition of a few low, loose-laid stone walls about the tinaja, the only structures of the kind known in Seriland.

RANCHO SAN FRANCISCO DE COSTA RICA: Name applied by the founder, Señor Pascual Encinas, about 1850.

RANCHO SANTA ANA: Name applied by the founder, Señor Encinas, about 1870.

RANCHO LIBERTAD: Name applied by the founder, Señor Encinas, about 1875.

The fairly full geographic nomenclature of Seriland merely expresses the necessity for place-names, felt in some measure by all intelligent beings, and realized especially by explorers and describers of the region. Excepting the ranchos and perhaps Pozo Escalante, they denote natural features only, and, with the same exceptions, the features are seen but rarely or from great distances by enlightened men. Despite

the wealth of place-names and the strongly accentuated configuration which the nomenclature expresses, Seriland is one of the most hopeless deserts of the American hemisphere.

ACKNOWLEDGMENTS

Since most of the field work of the two expeditions lay in the neighboring Republic of Mexico, it became necessary to ask official sanction for the operations from the Mexican government; and it is a pleasure to say that every possible privilege and courtesy were extended by both federal and state officials. Especial acknowledgments are due to the Mexican minister (and afterward ambassador) to the United States, his Excellency Don Mateo Romero (now deceased); to the Ministro de Fomento of the Mexican Republic, Excelencia Don Fernando Leal; and to the governor of the State of Sonora, Señor Don Ramón Corral. Equal acknowledgments are due to various United States officials, notably Honorable W. Woodville Rockhill, First Assistant Secretary of State when the expeditions were planned; and it is a pleasure to advert to the active interest taken in both expeditions by Honorable S. P. Langley, Secretary of the Smithsonian Institution, and to the careful attention given the 1894 expedition by the late Dr G. Brown Goode, Assistant Secretary of the Institution.

Mr Willard D. Johnson did invaluable service in connection with the second expedition, particularly in the execution of surveys and the construction of maps in inimitable style. Mr William Dinwiddie is to be credited with the excellent photographs made during the 1894 expedition, with the representation of the devices used in Seri face-painting, and with various other aids to the investigation; while Mr J. W. Mitchell is to be credited with the photographs made on Isla Tiburon, and with other contributions to the success of the 1895 expedition. Acknowledgments are due also to all of the participants in both expeditions, whose names appear in other paragraphs. Their contributions were not primarily intellectual, yet were of a kind and amount to be forever remembered among men who have worked and hungered and thirsted and stood guard together. The deepest debt connected with the field work is to the now venerable but ever vigorous pioneer, Señor Pascual Encinas; and no small part of this debt goes over to his estimable spouse, Señora Anita Encinas, who twice traversed the long road from Hermosillo to Costa Rica in the interest of the 1895 expedition.

The scientific results of the researches have been enriched by invaluable contributions from Director Powell's store of ethnologic knowledge, and by suggestions from Messrs Frank Hamilton Cushing, F. W. Hodge, James Mooney, and other collaborators in the Bureau of American Ethnology. The qualities of the colored illustrations are due largely to the artistic skill of Mr Wells M. Sawyer, by whom they were designed, and of Mr DeLancey Gill, by whom the proofs were revised. The Spanish translations are due chiefly to Colonel F. F.

Hilder, ethnologic translator of the Bureau, partly to Mr Emanuele Fronani; though neither can be charged with errors of interpretation or of Englishing, both finally shaped by the author. The somatic determinations and discussions were by Dr Ales Hrdlička, of New York; the tests for arrow poison were made by Dr S. Weir Mitchell, of Philadelphia; while the philologic comparisons were made almost wholly (with notable thoroughness and perspicacity, and in such wise as to illustrate the wealth and utility of the linguistic collections of the Bureau) by Mr J. N. B. Hewitt. Finally, it has become due, probably for the first time in the nearly four centuries of their history, to make public acknowledgment of services by Seri Indians, viz, subchief Mashém, the real sponsor for the Bureau vocabulary and many other data, and "El General" Kolusio, the outlaw interpreter of Hermosillo and contributor to certain historical identifications.

HABITAT

LOCATION AND AREA

Seriland, the home from time immemorial of the Seri Indians, lies in northwestern Mexico, forming a part of the State of Sonora. It comprises Tiburon island, the largest and most elevated insular body in Gulf of California, together with a few islets and an adjacent tract of mainland; the center of the district being marked approximately by the intersection of the parallel of 29° with the meridian of 112° . The territory is divided by the narrow but turbulent strait, El Infiernillo. It is bounded on the west and south by the waters of the gulf with its eastward extensions to Kino bay, on the east by a nearly impassable desert, and on the north by a waterless stretch of sandy plains and rugged sierras 50 to 100 miles in extent.

Tiburon island is about 30 miles in length from north to south and 12 to 20 miles in width; its area, with that of the adjacent islets, is barely 500 square miles. The mainland tract held by the Seri is without definite boundary; measured to the middle of the limiting desert on the east and halfway across the waterless zone on the north, its area may be put at 1,500 square miles. To this land area of 2,000 square miles may be added the water area of the strait, with its northern and southern embouchures, and the coastwise waters habitually navigated by the Seri balsas as far as Kino bay, making half as much more of water area. Such is the district which the Seri claim and seek to control, and have practically protected against invasion for nearly four centuries of history and for uncounted generations of prehistory.

PHYSICAL CHARACTERISTICS

Seriland forms part of a great natural province lying west of the Sierra Madre of western Mexico and south of an indefinite boundary about the latitude of Gila river, which may be designated the Sonoran province; it differs from Powell's province of the Basin ranges in that it opens toward the sea, and also in other respects; and it is allied in many of its characteristics to the arid piedmont zone lying west of the Andes in South America.

In general configuration the province may be likened to a great roof-slope stretching southwestward from a comb in the Sierra Madre to a broad eaves-trough forming Gulf of California, the slope rising steeper toward the crest and lying flatter toward the coast; but the expanse is warped by minor swells, guttered by waterways, and dormered by out-

lying ranges and buttes. The most conspicuous inequality of the slope (partly because of its coincidence with tide-level) is offered by the rugged ranges of Seriland. These may be considered four in number, all approximately parallel with each other and with the coast; the first is a series of eroded remnants (Cerros Anacoretos) from 600 to 1,200 feet in height; the second is the exceedingly rugged Sierra Seri, culminating in Johnson peak 5,000 feet above tide; the third is Sierra Kunkaak, attaining about 4,000 feet in its highest point; the fourth is Sierra Menor, some 2,000 feet high, with the northern extremity sliced off obliquely by marine erosion. The principal arm of Desierto Encinas lies between the first two ranges, El Infiernillo separates the second and third, while a subdesert valley divides the third from the fourth. The valleys correspond more closely than the ranges; if the land level were 100 feet higher the strait and its terminal bays would become an arid valley like the others, while if the sea-level were 500 feet higher the four ranges would become separate islands similar to Angel de la Guarda and others in the gulf.

The Sonoran province is notably warm and dry. The vapor-laden air-currents from the Pacific drift across it and are first warmed by conduction and radiation from the sun-scorched land, to be chilled again as they roll up the steeper roof-slope to the crest; and the precipitation flows part way down the slopes, both eastward and westward from the Sierra Madre—literally the Mother (of waters) range. A climatal characteristic of the province is two relatively humid seasons, coinciding with the two principal inflections of the annual temperature-curve, i. e., in January-February and July-August, respectively. In the absence of meteorologic records the temperature and precipitation may be inferred from the observations at Yuma and Tucson,¹ which are among the warmest and driest stations in America, or indeed in the world; though it is probable that such points as Caborca, Bacuachito, and Hermosillo are decidedly warmer and perhaps slightly moister than Yuma. The ordinary midday summer temperature at these points may be estimated at about 110° in the shade (frequently rising 5° or 10° higher, but dropping 20° to 50° in case of cloudiness); the night temperature at the same season is usually 50° to 75°, though during two-thirds of the year it is liable to fall to or below the freezing point. The sun temperature is high in comparison with that measured in the shade, the exposed thermometer frequently rising to 150° or 160°, according to its construction, while black-finished metal becomes too hot to be handled, and dark sand and rocks literally scorch unprotected feet. The leading characteristic of the temperature is the wide diurnal range and the relatively narrow annual range; another characteristic is the uniformity, or periodic steadiness, of the maxima, coupled with variability and nonperiodicity of the minima.

¹ The following monthly and annual meteorologic summaries, compiled from United States Weather Bureau records at these stations, have been kindly furnished by Prof. Willis L. Moore, Superintend-

The precipitation on the Sonoran province is chiefly in the form of rain; in the winter humid season snow falls frequently on the Sierra Madre and rarely on the outlying ranges; in both humid seasons (and in humid spots at all seasons) dew forms in greater or less abundance. Fog frequently gathers along the coast, especially during the winter and in the midsummer wet season, and sometimes drifts inland for miles. The mean annual precipitation may be estimated at 20 or 25 inches toward the crest and half as much toward the base of the high sierra; thence it diminishes coastward, probably to less than 2 inches; the mean for the extensive plains forming the greater part of the province may be estimated at 3 or 4 inches. The greater part of the precipitation is in

ent of the Bureau. The tabulated records represent the observations of twenty years at Yuma and ten years at Tucson.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Absolute maximum temperature, Fahr.:													
Yuma	81	91	100	105	112	117	118	115	113	108	92	83	118
Tucson	84	85	95	101	106	111	110	109	106	97	89	82	111
Absolute minimum temperature, Fahr.:													
Yuma	22	25	31	40	44	52	61	60	50	41	31	25	22
Tucson	14	20	24	32	38	39	64	60	46	31	23	11	11
Mean maximum temperature, Fahr.:													
Yuma	65.1	70.7	78.5	85.4	93.2	101.2	106.7	104.9	99.6	87.2	75.0	67.4	86.6
Tucson	62.9	67.0	74.5	81.4	91.4	100.2	99.0	94.8	92.2	82.8	71.5	63.7	81.8
Mean minimum temperature, Fahr.:													
Yuma	42.0	46.1	50.8	55.1	61.4	68.3	77.2	77.6	70.5	58.5	48.8	44.7	58.4
Tucson	34.9	41.5	44.0	48.1	55.3	63.8	75.0	73.6	67.3	52.1	42.5	35.1	52.8
Mean temperature, Fahr.:													
Yuma	54.1	58.8	64.5	69.8	77.2	84.9	91.5	90.7	84.4	73.0	61.9	56.0	72.2
Tucson	49.4	53.2	59.5	65.6	74.0	82.3	87.2	83.5	77.7	68.5	57.0	52.0	67.4
Mean precipitation (inches and hundredths):													
Yuma	0.42	0.51	0.26	0.07	0.04	T.	0.14	0.35	0.15	0.28	0.29	0.46	3.04
Tucson	0.75	0.98	0.90	0.17	0.16	0.19	2.86	3.08	1.16	0.33	0.37	0.95	12.26
Prevailing winds:													
Yuma	N.	N.	W.	W.	W.	SW.	S.	S.	NE.	NE.	N.	N.	N.
Tucson	S.	S.	S.	W.	S.	SW.	SE.	SE.	S.	S.	S.	SE.	S.
Average cloudiness (scale 0-10):													
Yuma	2.4	2.4	2.4	1.6	1.3	0.8	1.8	2.3	1.1	1.3	1.7	2.5	1.8
Tucson	3.0	3.2	3.2	1.8	1.6	1.5	4.5	4.4	1.9	1.6	1.6	2.9	2.6

local storms, frequently accompanied by thunder-gusts or sudden tempests, though cold drizzles sometimes occur, especially at the height of the winter humid season. Except where the local configuration is such as to affect the atmospheric movements, the distribution of precipitation is erratic, in both time and space; some spots may receive half a dozen rains within a year, while other spots may remain rainless for several years; and the wet spot of one series of years may be the dry spot of the next.

The climatal features of Seriland are somewhat affected by the pronounced topographic features of the district. Snow sometimes falls on Sierra Seri, and probably on Sierra Kunkaak; gales gather about the rugged ranges at all seasons, and sometimes produce precipitation out of season; the extreme heat of midday and midsummer is tempered by the proximity of the tide-swept gulf; and since most of the local derangements tend to augment precipitation and reduce temperature, it would seem safe to estimate the mean annual rainfall of the tract at 4 or 5 inches, and the mean temperature at about 70° , with a mean annual range of some 30° and an extreme diurnal range of fully 80° .

The configuration and climate combine to give distinctive character to the hydrography of the Sonoran province. The melting snows and more abundant rains of the high sierras form innumerable streams flowing down the steeper slopes toward the piedmont plains, or soak into the pervious rocks to reappear as springs at lower levels; sometimes the streams unite to form considerable rivers, flowing scores of miles beyond the mountain confines; but eventually all the running waters are absorbed by the dry sands of the plains or evaporated into the drier air; and from the mouth of the Colorado to that of the Yaqui, 500 miles away, no fresh water ever flows into the sea. During the winter wet season, and to a less extent during that of summer, the mountain waterways are occupied by rushing torrents, rivaling great rivers in volume, and these floods flow far over the plains; but during the normal droughts the torrents shrink to streamlets purling among the rocks, or give place to blistering sand-wastes furlongs or even miles in width and dozens of miles in length, while beyond stretch low, radially scored alluvial fans, built by the great freshets of millenniums. Only a trifling part of the rainfall of the plains ever gathers in the waterways heading in the mountains, and only another small part gathers in local channels; the lighter rains from higher clouds are so far evaporated in the lower strata of the air as to reach the earth in feeble sprinkles or not at all; the product of moderate showers is absorbed directly by earth and air; while the water of heavy rains accumulates in mud-burdened sheets, spreading far over the plains, flowing sluggishly down the slopes, yet suffering absorption by earth and air too rapidly to permit concentration in channels. These moving mud-blankets of the plains, or sheetfloods,¹ are often supplemented by

¹ Defined and described in Sheetflood Erosion, Bull. Geol. Soc. Am., vol. VII, 1897, p. 87.

the discharge from the waterways of adjacent sierras and buttes; they are commonly miles and frequently dozens or scores of miles in width, and the linear flow may range from a fraction of a mile to scores of miles according to the heaviness of the rainfall and the consequent dilution of the mud. Such sheetfloods, especially those produced by considerable rains, are characteristic agents of erosion throughout most of the province; their tendency is to aggrade depressions and corrade laterally, and thus to produce smooth plains of gentle slope interrupted only by exceptionally precipitous and rugged mountain remnants. A part of the sheetflood water joins the stronger mountain-born streams, particularly toward the end of the great storm whereby earth and air are saturated; another part forms ground-water, which slowly finds its way down the slopes toward the principal valleys, perhaps to reappear as springs or to supply wells. These with certain other conditions determine the water-supply available for habitation throughout Seriland and adjacent Papagueria.

Another condition of prime importance arises in a secular tilting of the entire province southwestward. This tilting is connected with the upthrust of the Sierra Madre and the uplifting of the plateau country and the southern Rocky mountain region north of the international boundary. Its rate is measured by the erosion of the Grand Canyon of the Colorado and other gorges; and its dates, in terms of the geologic time-scale, run at least from the middle Tertiary to the present, or throughout the Neocene and Pleistocene. Throughout this vast period the effect of the tilting in the Sonoran province has been to invigorate streams flowing southward, and to paralyze streams flowing toward the northerly and easterly compass-points; accordingly the streams flowing toward the gulf have eroded their channels effectively during the ages, and have frequently retrogressed entirely through outlying ranges; so that throughout the province the divides seldom correspond with the sierra crests.

A typical stream of the province is Rio Bacuache, one of the two practicable overland ways into Seriland (albeit never surveyed until traversed by the 1895 expedition). Viewed in its simple geographic aspect, this stream may be said to originate in a broad valley parallel with the gulf and the high sierra, 200 miles northeast of Kino bay; its half-dozen tributary arroyos (sun-baked sand-washes during three hundred and sixty days and mud-torrents during five days of the average year) gather in the sheetflood plain and unite at Pozo Noriega, where the ground-water gives permanent supply to a well; then the channel cleaves a rocky sierra 3,000 feet high in a narrow gorge, and within this canyon the ground-water gathered in the valley above seeps to the surface of the sand-wash and flows in a practically permanent streamlet throughout the 4 or 5 miles forming the width of the sierra; then the liquid sinks, and 25 miles of blistering sand-wash (interrupted by a single lateral spring) stretch across the next valley

to Pueblo Viejo, where another sierra is cleft by the channel, and where the water again exudes and flows through a sand-lined rock-bed (figure 2). In the local terminology this portion alone is Rio Bacuache, the upper stretches of the waterway bearing different names; it supplies the settlement and fields of Bacuachito, flowing above the sands 5 to 15 miles, according to season; then it returns to the sand-wash habit for 50 miles, throughout much of which distance wells may find supply at increasing depths; finally it passes into the delta phase, and enters northeastern Seriland in a zone marked by exceptionally vigorous mesquite forests. Normally the 200 miles of streamway is actual stream only in two stretches of say 5 miles each, some 25 miles apart,



FIG 2—Gateway to Seriland—gorge of Rio Bacuache.

and the farther of these stops midway between the head of the channel and the open sea toward which it trends and slopes; but during and after great storms it is transformed into a river approaching the Ohio or the Rhine in volume, flowing tumultuously for 150 miles, and finally sinking in the sands of Desierto Encinas, 30 to 50 miles from the coast. Viewed with respect to genesis, Rio Bacuache has responded to the stimulus of the southwestern tilting, and has retrogressed up the slope through two sierras, besides minor ranges and 100 miles of sheetflood-carved plains; while the debris thus gathered has filled the original gorge to a depth of hundreds of feet, and has overflowed the adjacent sheetflood-flattened expanses to form the great alluvial fan of eastern Seriland. The genetic conditions explain the distribution

of the water: the product of the semiannual storms suffices to form a meager supply of ground water, which is diffused in the sands and softer rocks of the plains, and concentrated in the narrow channels carved through the dense granites of the sierras; and enough of the flow passes the barriers to supply deep wells in the terminal fan, as at the frontier ranchos Libertad (abandoned) and Santa Ana, just as the subterranean seepage from the Sonora more richly supplies the deep well at San Francisco de Costa Rica. In these lower reaches the mineral salts, normally present in minute quantities, are concentrated so that the water from these wells is slightly saline, while deeper in the desert the scanty water is quite salt.

In Seriland proper the distribution of potable water is conditioned by the meager precipitation, the local configuration (shaped largely by sheetflood erosion), and the disturbance of equilibrium of the scanty ground-water due to the tilting of the province. The most abundant permanent supply of fresh water is that of Arroyo Carrizal, which is fed by drainage and seepage from the broad and lofty mass of pervious rocks forming the southern part of Sierra Kunkaak, the abundant supply being due to the fact that the eastern tributaries are energetically retrogressing into the mass in deep gorges which effectually tap the water stored during the semiannual storms. The arroyo and valley of Agua Dulce are less favorably conditioned by reason of a trend against the tilting of the province and by reason of the narrower and lower mass of tributary rock in the northern part of the range, and the flow is impermanent, as indicated by the absence of canes and other stream plants; yet four explorers (Ugarte, 1721; Hardy, 1826; Espence, 1844; Dewey, 1875) reported fresh water, apparently in a shallow well tapping the underflow, at the embouchure of the arroyo. On the eastern slope of Sierra Kunkaak there are several arroyos which carry water for weeks or even months after the winter rains, and sometimes after those of summer; but the only permanent water—Tinaja Anita—is at the base of a stupendous cliff of exceptionally pervious and easily eroded rocks, so deeply cut that ground-water is effectually tapped, while an adjacent chasm—Arroyo Millard—is so situated that the cliff-faced spur of the sierra above the tinaja absorbs an exceptional proportion of the surface flowage from the main crest. The tinaja (figure 3) is permanent, as indicated by a canebrake some 20 by 50 feet in extent, and by a native fig and a few other trees—though the dry-season water-supply ranges from mere moisture of the rocks to a few gallons caught in rock basins within the first 50 yards of the head of the arroyo. No other permanent supplies of fresh water are known on the island, though there are a few rather persistent tinajas along the western base of Sierra Menor above Willard point.

On the mainland tract there is a cliff-bound basin, much like that of Tinaja Anita, at the head of Arroyo Mitchell and base of Johnson peak, christened Tinaja Trinchera; but the range is narrow and the rocks

granitic, and hence the supply is not quite permanent.¹ A practically permanent supply of water is found in one or more pools or barrancas at the head of Playa Noriega in Desierto Encinas. The liquid lies in pools gouged by freshets in the bottoms of arroyos coming in from the northward, just where the flow is checked by the spread of the waters over the always saline playa; and, since they are modified by each freshet, they are sometimes deep, sometimes shallow, sometimes entirely sand-filled. When the barrancas are clogged, or when their contents are evaporated, coyotes, deer, horses, and vaqueros obtain water by excavating a few feet in the sand lining the larger arroyos. Commonly the barranca water is too saline for Caucasian palates save



FIG. 3—Tinaja Anita.

in dire extremity, but the salinity diminishes as the arroyos are ascended. An apparently permanent supply of saline and nitrous water is found in a 10-foot well, known as Pozo Escalante, or Agua Amarilla (yellow water), near the southern extremity of Desierto Encinas, reputed to have been excavated by Juan Bautista de Escalante in 1700, and still remaining open; its location is such that it catches the subterranean seepage from both Bacuache and Sonora rivers. The water is potable but not palatable. Among the vaqueros of San Francisco de Costa Rica there is a vague and ancient tradition of a carrizal-marked tinaja or arroyo (Aguaje Parilla) at the eastern base of the southern portion of Sierra Seri; and both vaqueros and Indians

¹ Tinaja Trinchera was entirely dry and without trace of carrizal in December, 1894.

refer to one or more saline barrancas about the western base of the same semirange, probably in Arroyo Mariana.

In brief, Arroyo Carrizal, Tinaja Anita, and Pozo Escalante are the only permanent waters, and Pozo Hardy, Barranca Salina, and Tinaja Trinchera the only subpermanent waters actually known to Caucasians in all Seriland, though it seems probable that permanent water may exist at Aguaje Parilla and in Arroyo Mariana, and impermanent supplies near Bahia Espence. There may be one or two additional places of practically permanent water in smaller quantity, and a few other places in which saline water might be found either at the surface or by slight excavation, and which may be approximately located by inspection of the map under guidance of the principles set forth in the preceding paragraphs; but this would seem to be the limit of trustworthy water supply. During the humid seasons the waters are naturally multiplied, yet it is improbable that any of the arroyos except Carrizal and Agua Dulce and a few minor gulches along the more precipitous shores shed water into the gulf save at times of extraordinary local flood.¹

The geologic structure of the Sonoran province is complex and not well understood. So far as the meager observations indicate, the basal rocks are granites, frequently massive and sometimes schistose, sometimes intersected by veins of quartz, etc. The granitic mass is upthrust to form the nuclei of Sierra Madre and other considerable ranges; it also approaches the surface over large areas of plains. Resting unconformably on the granites lie heavy deposits of shales and limestones, commonly more or less metamorphosed; these rocks outcrop on the slopes of most of the main ranges and form the entire visible mass of some of the lower sierras and buttes, while they, too, sometimes approach the surface of the sheetflood-carved plain. The rocks, both calcareous and argillaceous, combine the characters of the vast Mesozoic limestone deposits of eastern Mexico and the immense shale accumulations of corresponding age in California, and hence probably represent the later half of the Mesozoic. This is the only sedimentary series recognized in the province. Both the granites and the sedimentary beds are occasionally overlain by volcanic deposits, chiefly in the form of much-eroded lava-sheets and associated tuff-beds, which sometimes form considerable ranges and buttes (notably Sierra Kunkaak, of Isla Tiburon); these remnantal volcanic deposits are probably late Mesozoic or early Tertiary. Newer volcanics occur locally, forming mesas, as about Agua Nueva (40 miles northwest of Hermosillo), or even coulees apparently filling barrancas of modern aspect, as in the vicinity of Bacuachito,² or rising into cinder cones surrounded by

¹The physiographic features of the Sonoran province in general are treated in greater detail in a paper on Sheetflood Erosion, *Bull. Geol. Soc. Am.*, vol. VIII, 1897, pp. 87-112, and in a paper on Papagueria, *Nat. Geog. Mag.*, vol. IX, 1898, pp. 345-371; while certain local features are described in a paper on Seriland, prepared jointly with Willard D. Johnson, *Nat. Geog. Mag.*, vol. VII, 1896, pp. 125-133. The aggregate available fresh water of Seriland is estimated on p. 181.

²Noted by Willard D. Johnson.

ejectamenta, as at Pico Pinacate, in northwestern Sonora. The various rocks are usually bare or meagerly mantled with talus in the mountains; over the greater part of the plains they are commonly veneered with sheetflood deposits, ranging from a few inches to a few yards in thickness; while the central portions of the larger valleys are lined with alluvial accumulations reaching many hundreds of feet in thickness.

The clearly interpretable geologic history began with extensive degradation and eventual baseleveling of a granitic terrane in Paleozoic or early Mesozoic time; then followed the deposition of the shales and associated limestones during the later Mesozoic; next came elevation, accompanied or followed by corrugation, chiefly in folds parallel with the present coast, whereby the granite-based sierras were produced, and accompanied also by the earlier vulcanism to which the volcanic sierras owe their existence. A vast period of degradation ensued, during which the land stood so high as to induce greater precipitation than that of today and to permit the streams to carve channels far below the present level of tide, and during which the present general configuration was developed; then came the southwestward tilting and consequent climatal desiccation, the filling of the deeper valleys, the inauguration of sheetflood erosion, some local vulcanism, and the progressive shifting of the divides.

The geologic structure affects the hydrography, especially that factor determined by subterranean circulation, or ground-water; for the superficial sheetflood and alluvial deposits are highly pervious and many of the volcanics hardly less so, while the shales and limestones are but slightly pervious and the granites nearly impervious. The geologic structure also determines the character of the soil with exceptional directness, since the dryness of the air and the dearth of vegetation reduce rock decay to a negligible quantity. The characteristically precipitous sierras and cerros are of naked ledges, save where locally mantled with a mechanical débris of the same rocks (much finer than the frost product of colder and humider regions); the soil of the normal plains is but the little-oxidized upper surface of sheetflood deposits made up of the mechanical debris of local rocks and varying in coarseness with the slope; while the soil of the valleys is detrital sand and silt, derived from tributary slopes, passing into adobe where conditions are fit, and essentially mechanical in texture and structure save where cemented by ground-water solutions at the lower levels.

FLORA

The flora of the Sonoran province affords a striking example of the adjustment of vegetal life to an unfavorable environment. The prevailing vegetation is perennial, of slow growth and of stunted aspect; and it is not distributed uniformly but arranged in separate tufts or clusters, gathering into a nearly continuous mantle in wetter spots, though commonly dotting the plains sparsely, to completely disappear

in the driest areas. Nearly all of the plants have roots of exceptional length, and are protected from evaporation by a glazed epidermis and from animal enemies by thorns or by offensive odors and flavors; while most of the trees and shrubs are practically leafless except during the humid seasons. Grasses are not characteristic, and there is no sward, even in oases; but certain grasses grow in the shadow of the arborescent tufts and in the fields of the farmer ants, or spring up in scattered blades over the moister portions of the surface. The arborescent vegetation represents two characteristic types, viz, (1) trees and shrubs allied to those of humid lands, but modified to fit arid conditions; and (2) distinctive forms, evidently born of desert conditions and not adapted to a humid habitat, this type comprising the cacti and related forms, as well as forms apparently intermediate between the cacti and normal arborescent type. The various plants of the district, including those of the distinctive types, are communal or commensal, both among themselves and with animals, to a remarkable degree; for their common strife against the hard physical environment has forced them into cooperation for mutual support. The tufts or clusters in which the vegetation is arranged express the solidarity of life in the province; commonly each cluster is a vital colony, made up of plants of various genera and orders, and forming a home for animal life also of different genera and orders; and, although measurably inimical, these various organisms are so far interdependent that none could survive without the cooperation of the others.¹

In Seriland proper, as in other parts of the Sonoran province, a prevailing tree is the mesquite (*Prosopis juliflora*); on the alluvial fan of Rio Sonora it grows in remarkable luxuriance, forming (with a few other trees) a practically continuous forest 20 to 40 feet in height, the gnarled trunks sometimes reaching a diameter of 2 or 3 feet; over the Rio Bacuache fan and much of the remaining plain surface it forms the dominant tree in the scattered vital colonies; and here and there it pushes well into the canyon gorges. The roots of the mesquite are of great length, and are said to penetrate to water-bearing strata at depths of 50 to 75 feet; its fruit consists of small hard beans embedded in slender woody pods. Associated with the mesquite in most stations are the still more scraggy and thorny cat-claw (*Acacia greggii*) and ironwood (*Olneya tesota*), both also yielding woody beans in limited quantity. Similarly associated, especially in the drier tracts, and characteristically abundant over the plains portions of Isla Tiburon, are the paloverdes (*Parkinsonia torreyana*, etc), forming scraggy, wide-branching, green-bark trees 5 to 15 feet high, and commonly 3 to 10 inches in diameter of trunk. Over the mountain sides, especially of Sierra Seri and Sierra Kunkaak, grow sparsely the only straight-trunk trees of the region, rooted in the rocks to the average number of a few score to the square

¹The vital characteristics of the region have been described in some detail in *The Beginning of Agriculture*, *American Anthropologist*, vol. VIII, 1895, pp. 350-375; *The Beginning of Zooculture*, *American Anthropologist*, vol. X, 1897, pp. 215-230; and *Expedition to Seriland*, *Science*, vol. III, 1896, pp. 493-505.

mile; this is the paloblanco (*Acacia willardiana*). Associated with it along rocky barrancas of permanent water supply is a fig tree (*Ficus palmeri*), which has a habit of springing from the walls and crests of cliffs, and sending white-bark roots down the cliff-faces to the water 50 or 100 feet below, and which yields a small, insipid, and woody fruit. Interspersed among the larger trees, and spreading over the intervening spaces, particularly in the drier and more saline spots, grow a number of thorny shrubs, much alike in external appearance and habit, though representing half a dozen distinct genera (*Cassia*, *Microrhamnus*, *Celtis*, *Krameria*, *Acacia*, *Randia*, *Stegnosperma*, *Frankenia*, etc), while considerable tracts are sparsely occupied by straggling tufts of the Sonoran



FIG. 4—Beyond Encinas desert—the saguesa.

greasewood, or creosote bush (*Larrea tridentata*), whose minute but bright green leafage relieves that prevailing gray of the landscape in which the lighter greens of the paloverde and cactus stems are lost.

Intermingling with the woody trees and shrubs in most stations, and replacing them in some, are the conspicuous and characteristic cacti in a score of forms. East of Desierto Encinas, and sometimes west of it, these are dominated by the saguaro (*Cereus giganteus*), though throughout most of Seriland the related saguesa (*Cereus pringleii*?) prevails. The saguaro is a fluted and thorn-decked column, 1 foot to 3 feet in diameter and 10 to 60 feet in height, sometimes branching into a candelabrum, while the still more monstrous saguesa (figure 4) usually consists of from three to ten such columns springing from a

single root; both are masses of watery pulp, revived and renewed during each humid season, and both flower in a crown of fragrant and brilliant blossoms at or near the top of column or branch, and fruit in fig-like tunas (or prickly pears) during late summer or early autumn. Ordinarily the saguesa, like the saguaro, is sparsely distributed; but there is an immense tract between Desierto Encinas and the eastern base of Sierra Seri in which it forms a literal forest, the giant trunks close-set as those of trees in normal woodlands. Hardly less imposing than the giant cactus is the wide-branching species known as pitahaya (*Cereus thurberi?*), in which the trunks may be ten to fifty in number, each 4 to 8 inches in diameter and 5 to 40 feet in height; and equally conspicuous, especially in eastern Seriland, is the cina (*Cereus schotti*), which is of corresponding size, and differs chiefly in the simpler fluting of the thorn-protected columns. Both the pitahaya and the cina flower and fruit like the saguaro, the tunas yielded by the former being especially esteemed by Mexicans as well as Indians. Another important cactus is the visnaga (*Echinocactus wislizeni lecontei*), which rises in a single trunk much like the saguaro, save that it is commonly but 3 to 6 feet in height and is protected by a more effective armature of straight and curved thorns; it yields a pleasantly acid, pulpy fruit, which may be extracted from its thorny setting with some difficulty; but its chief value lies in the purity and potability of the water with which the pulpy trunk is stored. The visnaga is widely distributed throughout the Sonoran province and beyond, and extends into eastern Seriland; it is rare west of Desierto Encinas and is practically absent from Isla Tiburon, where it may easily have been exterminated by the improvident Seri during the centuries of their occupancy. Most abundant of all the cacti, and less conspicuous only by reason of comparatively small size, is the cholla (an arborescent *Opuntia*); on many of the sheetflood-carved plains it forms extensive thickets 5 to 8 feet high, the main trunks being 2 to 6 inches in diameter, while dozens or hundreds of gaunt and thorn-covered branches extend 3 to 8 feet in all directions; and it occurs here and there throughout the district from the depths of the valleys and the coast well up to the rocky slope of the sierras. It yields quantities of fruit, somewhat like tunas, but more woody and insipid; this fruit is seldom if ever used for human food, but is freely consumed by herbivores. Much less abundant than the cholla is the nopal, or prickly pear; and there are various other opuntias, often too slender to stand alone and intertwined with stiffer shrubs which lend them support, and many of these yield small berry like tunas. Another characteristic cactus, widespread as the cholla and abundant in nearly all parts of Seriland save on the rocky slopes, is the okatilla (*Fouquieria splendens*). It consists of half a dozen to a score of slender, woody, and thorn-set branches radiating from a common root, usually at angles of 30° to 45° from the vertical, and ordinarily reaching heights of 10 to 20 feet.

The pulp masses of the larger cacti, especially the saguaro, saguesa, pitahaya, and cina, are supported by woody skeletons in the form of vertical ribs coincident with the external flutings; within a few years after the death and decay of these desert monsters the skeletons weather out, and the vertical ribs form light and strong and approximately straight bars or shafts, valuable for many industrial purposes; while the slender arms of okatilla are equally valuable, in the fresh condition after removal of the spiny armament, and in the weathered state without special preparation.

On many of the higher plain-slopes, especially in eastern Seriland, there are pulpy stemmed shrubs and bushes, sometimes reaching the dignity of trees, which present the normal aspect of exogenous perennials during life, but which are so spongy throughout as to shrink into shreds of bark-like debris shortly after death. These are the torotes of the Sonoran province—common torote (*Jatropha cardiophylla*), torote amarillo (*Jatropha spatulifolia*), torote blanco (*Bursera microphylla*), torote prieto (*Bursera laxa*), torotito (*Jatropha canescens*?), etc. These plants grow in the scattered and scraggy tufts characteristic of arid districts (a typical torote tuft appears in left foreground of figure 4); they are protected from evaporation by the usual glazed epidermis, and maintained by the water absorbed during the humid seasons; but they are thornless and are protected from animal enemies by pungent odors, and at least in some cases by toxic juices. Like various plants of the province they are measurably communal—indeed, the torotito appears to be dependent on union with an insect for reproduction, like certain yuccas, and like the cina and (in some degree at least) the saguaro and other cacti.

Along the lower reaches of Río Bacuache, and in some of the deeper gorges of Sierra Seri and Sierra Kunkaak, grow a few veritable trees of moderately straight trunk and grain and solid wood, such as the guaiacan (*Guaiacum coulteri*) and sanjuanito (*Jacquinia pungens*); both of these fruit, the former in a wahoo-like berry of medicinal properties, and the latter in a nut, edible when not quite ripe and forming a favorite rattle-bead when dry. On the flanks of such gorges the slender-branched baraprieta (*Casalpinia gracilis*) grows up in the shelter of more vigorous shrubs, its branches yielding basketry material, while its fruit is a woody bean much like that of the cat-claw. In like stations there are occasional clumps of yerba mala or yerba de flecha (*Sebastiania bilocularis*), an exceptionally leafy bush growing in straight stems suitable for arrowshafts, and alleged to be poisonous from root to leaf—with inherent probability, since the plant is without the thorny armature normal to the desert. Along the sand-washes, especially about their lower extremities wet only in floods, springs a subannual plant (*Hymenoclea monogyra*) which shrinks to stunted tussocks after a year or more of drought, but flourishes in close set fens after floods; though of acrid flavor and sage-like odor, it is eaten by herbivores in

time of need, and it yields abundant seeds, consumed by birds, small animals, and men. About all of the permanent waters not invaded by white men and the white man's stock there are 'brakes of cane or carizal (*Phragmites communis* ?); the jointed stems are half an inch to an inch in thickness and 8 to 25 feet in height; the seeds are edible, while the stems form the material for balsas and afford shafts for arrows, harpoons, fire-sticks, etc., and the silica-coated joints may be used for incising tough tissues.

The coasts of Seriland, both insular and mainland, are skirted by zones of exceptionally luxuriant shrubbery, maintained chiefly by fog moisture. Along the mountainous parts of the coast the zone is narrow and indefinite, but on the plains portions it extends inland for several miles with gradually fading characters; this is especially true in the southern portion of Desierto Encinas, where the fog effects may be observed in the vegetation 12 or 15 miles from the coast. Most of the fog-fed species are identical with those of the interior, though the shrubs are more luxuriant and are otherwise distinctive in habit. On the Tiburon side of gale-swept El Infiernillo, and to some extent along other parts of the coast, some of these shrubs (notably *Maytenus phyllanthroides*) grow in dense hedge-like or mat-like masses, often yards in extent and permanently modeled by the wind in graceful dune-like shapes. Somewhat farther inland the flatter coastwise zones of Tiburon are rather thickly studded with shrubby clumps from 6 inches to 2 feet high, made up of *Frankenia palmeri* with half a dozen minor communals; while still farther inland follows the prevailing Sonoran flora of mesquite, scrubby paloverde, and chaparral (*Celtis pallida*), etc, only a little more luxuriant than the normal.

Throughout Seriland proper, and especially in the interior valleys of Tiburon, grasses are more prevalent than in other portions of the Sonoran province, their abundance doubtless being due to the rarity of graminiverous animals during recent centuries.

FAUNA

Considered collectively, the fauna of the Sonoran province is measurably distinctive (though less so than the flora), especially in the habits of the organisms. The prevailing animals, like the plants of extraneous type, evidently represent genera and species developed under more humid conditions and adjusted to the arid province through a long-continued and severe process of adaptation; and no fundamentally distinct orders or types comparable with the cacti and torotes of the vegetal realm are known. The prime requisite of animal life in the province is ability to dispense with drinking, either habitually or for long intervals, and to maintain structure and function in the heated air despite the exceptionally small consumption of water; the second requisite is ability to cooperate in the marvelously complete solidarity of animal and vegetal life characteristic of subdesert regions. No

systematic studies have been made of special structures in the animal bodies adapting them to retention of liquids, either by storage (as in the stomach of the camel) or by diminished evaporation, though the prevalence of practically nonperspiring mammals, scale-covered reptiles, and chitin-coated insects suggests the selection, if not the development, of the fitter genera and species for the peculiar environment. Much more conspicuous are the characters connected with cooperation in the ever severe but never eliminative strife for existence in the sub-desert solidarity; the mammals are either exceptionally swift like the antelope, exceptionally strong like the local lion, exceptionally pugnacious and prolific like the peccary, or exceptionally capable of subsisting on waterless sierras like the bura and mountain goat; the reptiles are either exceptionally swift like the rainbow-hued lizards, exceptionally armed like the sluggish horned toads, exceptionally venomous like the rattlesnake, or exceptionally repulsive, if not poisonous, like the Gila monster; even the articulates avoid the mean, and are exceptionally swift, exceptionally protective in form and coloring, exceptionally venomous like the tarantula and scorpion and centipede, or exceptionally intelligent like the farmer ant and the tarantula-hawk; while there is apparently a considerable class of insects completely dependent on the cooperation of plants for the perpetuation of their kind, including the yucca moth and (undescribed) cactus beetle. Among plants the intense individuality (which is the obverse of the enforced solidarity) is expressed in thorns and heavily lacquered seeds and toxic principles; among animals it is expressed by chitinous armament, as well as by fleetness and fangs and deadly venom.

The larger land animals of Seriland proper are the mountain goat in the higher sierras, the bura (or mule-deer) and the white-tail deer on the mid-height plains and larger alluvial fans, with the antelope on the lower and drier expanses. Associated with these are the ubiquitous coyote, a puma, a jaguar of much local repute which roams the higher rocky sites, and a peccary ranging from the coast over the alluvial fans and mid-height plains of the mainland (though it is apparently absent from Tiburon). Of the smaller mammals the hare (or jack-rabbit) and rabbit are most conspicuous, while a long-tail nocturnal squirrel abounds, its burrows and tunnels penetrating the plains of finer debris so abundantly as to render these plains, especially on Tiburon, impassable for horses and nearly so for men. The California quail and the small Sonoran dove are fairly common; a moderate number of small birds haunt the more humid belts, and there is a due proportion of Mexican eagles and hawks of two or three forms, with still more numerous vultures. Ants abound, dominating the insect life, while wasps and spiders, with various flies and midges, gather about the vital colonies of the drier plains and swarm in the moister belts. Horned toads and various lizards—bright-colored and swift, or earth-tinted and sluggish—are fairly abundant, while black-tail rattlesnakes

haunt the more luxuriant vegetation of fog zones, permanent waters, and cienegas. On the whole, the land fauna of Seriland is much like that of the province in general, though the various forms of life are less abundant than the average, since all (except the abounding squirrel) are sought for food by the omnivorous Seri; and the distribution, even when relatively abundant, is woefully sparse, as befits the scant and scattered vegetal foundation for the animal life.

Strongly contrasted with the meagerness of the land fauna is the redundant aquatic fauna of that portion of the gulf washing the shores of Seriland. Tiburon island is named from the sharks, said by some explorers to have been seen by thousands along its coasts; these voracious feeders find ample food in literal shoals and swarms of smaller fishes; a not inconsiderable number of whales have survived the early fisheries (one, estimated at 80 feet in length, was stranded in Rada Ballena about 1887); while schools of porpoises play about Boca Infierno and elsewhere, making easy prey of slower swimmers caught in the tide-rips and gale-swept breakers. Proportionately abundant and varied is the crustacean life; littoral mollusks cling to the ledges exposed along all the rocky coast stretches, and the entire beach from Punta Antigualla to Punta Ygnacio is banded by a practically continuous bank of wave-cast molluscan shells, the shell-drift being often yards in width and many inches in depth. Common crabs abound in many of the coves, and a large lobster-like crab frequently comes up from deeper bights and bottoms; oysters attach themselves to rocks and to the roots of shrubby trees skirting protected bays like Rada Ballena, while clams are numerous in all broad mud-flats, such as those of Laguna la Cruz; and the pearl oyster was fished for centuries toward Punta Tepopa, until the ferocity of the Seri put an end to the industry. Especially abundant and large are the green turtles on which the Seri chiefly subsist, leaving the shells scattered along the shore and about rancherias in hundreds; while two land tortoises (*Gopherus agassizii* and *Cinosternum sonorensis*) range about the margins of the lagoons, and one of these is alleged to enter the water freely.

The abundance of water-fowl is commensurate with that of the submarine life. The pelican leads the avifauna in prominence if not in actual numbers, breeding on Isla Tassne (Pelican island), and periodically patrolling the whole of Bahia Kunkaak and El Infiernillo in lines and platoons of military regularity; gulls are always in sight, and the cormorant is common; while different ducks haunt several of the islets, and the shores are promenaded by curlews, snipes, and other waders. There is a corresponding wealth of plankton, which at low spring tide with offshore gale covers acres of shallow littoral with squirming or inert but always slimy life, the substratum for that of higher order; and jellyfish and echinoids are cast up by nearly every wave, while at night the surf rolls up the smooth strands in shimmering lines of phosphorescent light. On the whole, the aquatic life teems in tropic luxuriance

and more than ordinary littoral variety; for the waters of the gulf are warmed by radiation and conduction from its sun-parched basin, while the concentrated tides distribute and stimulate the species and keep the vital streams astir.

LOCAL FEATURES

Considered as a tribal habitat, Seriland comprises four subdivisions of measurably distinct character, viz, (1) the broad desert bounding the territory on the east; (2) the mountainous zone of Sierra Seri; (3) Tiburon island and the neighboring islets; and (4) the navigable straits and bays contiguous to island and mainland.

1. So far as its marginal portions are concerned, Desierto Encinas is a typical valley of the Sonoran province, sparsely dotted with vital colonies of the prevailing type and variegated by the exceptionally luxuriant mesquite forests of the Bacuache and Sonora fans; but the interior of the valley is rendered distinct by the fact that it lies near, if not below, the level of the sea.¹ The central feature is Playa Noriega—a film of brackish water for a few days after each considerable semiannual freshet, a sheet of saline mud for a few weeks later, and for the greater part of the year a salt-crusted sward 20 square miles in area, level as a floor and unimpressionable as a brick pavement. The playa is rimmed by dunes 10 to 40 feet in height, and about these and along the arroyos which occasionally break into it there is some aggregation of salt-enduring shrubs, evidently sustained in part by the semiannual freshet with its meager vapors and fogs. Outside this rim the surface is exceptionally broken; low dunes and irregularly wandering banks of soft and dust fine sand are interspersed with meandering salt flats much like the central playa, ranging from a few feet in width and a few yards in length up to mappable dimensions, as in the lesser playa lying east of the great one; and many of the dust-banks are honeycombed with squirrel burrows. This annulus of broken surface is narrow on the west, soon passing into okatilla scrub and then

¹The expedition of 1895, during which Seriland was surveyed, was not provided with apparatus for accurate vertical measurement, and hence altitudes were only approximately determined. The determinations by Mr Johnson, who executed the topographic surveys, indicated that even the lowest part of the valley is somewhat above sea-level; but other facts indicate that it actually lies below the level of the waters of the gulf, and forms a miniature homologue of Colorado desert (in southern California): in the first place the central playa, which is undoubtedly flooded occasionally if not semiannually, does not embouch into, and has no channels extending toward, the sea; in the second place it is highly saline; again, the alluvial fans of Rio Bacuache and (especially) of Rio Sonora are so placed as to intercept and dam the trough occupied by Laguna la Cruz in its southern portion, and Playa Noriega in its northern portion; concordantly, the detail configuration of the coast indicates marine transgression, apparently due to secular subsidence of the land—though the abundant marine shells of recent species toward the valley-bottom attest recent displacement of the sea. On the whole, the facts seem to indicate that, during recent geologic times, the lower portion of this valley was a shallow gulf extending northward (and probably also southward) from the eastern limit of Bahia Kino; that the importation and deposition of sediment, chiefly by Rio Sonora, outran the secular subsidence of the land so far as to displace the waters of the gulf in its central portion and to separate the northern arm from the sea; and that the waters of this northern arm were subsequently evaporated, disappearing finally in the central playa in which local inflow and evaporation are balanced by the usual mechanism of interior basins.

into the saguesa forests of the eastern base of Sierra Seri; on the east it is miles in breadth, passing gradually into the normal Sonoran plain; on the south it widens still farther, stretching all the way to Arenales de Gil and Pozo Escalante, and merging into the playa-like mud-flats bordering Laguna la Cruz, into which the gulf waters are sometimes forced by southwesterly gales at high spring tides. Throughout this portion of the desert, marine shells are scattered over the playa-like flats or lodged in the adjacent banks, sometimes in great beds; the vegetation is scantier than usual and largely of salt-loving habit; the mud-flats are usually coated with saline and alkaline crusts, while the dunes are soft and fluffy, and expand into broad belts perforated with the tunnels of the surprisingly abundant rodents. Across this plain of bitter sand-dust lie the two hard land routes to Seriland—the supposed Escalante route of 1700, down the fan of Rio Bacuache and thence by Barranca Salina; and the Encinas route, down the northern border of the Rio Sonora fan and thence by Pozo Escalante to the shores of Bahia Kino.¹

Desierto Encinas is an impossible human habitat in any proper sense; it is merely a broad and hardly passable boundary between habitats. The hardy stock of the frontier ranchos, pasturing partly on the thorny fruit of the cholla, push far out on the plains, and are sometimes watered for short periods, under strong guards of heavily armed vaqueros, at Barranca Salina; yet the greater part of the expanse is trodden only by the Seri. Two or three ruined frames of Seri jacales and a few graves crown the low knoll near Pozo Escalante, and there are one or two house remnants near Barranca Salina; these are notable not only as the easternmost remaining outposts of Seri occupancy, but because they represent the only known instances in all Seriland of the erection of even temporary houses adjacent to water. Distinct paths, trodden deep by bare Seri feet, radiate from both waters toward the Seriland interior, but no traceable trails extend eastward.

The southern limit of Desierto Encinas is marked either by the broad mud-flats opening into Laguna la Cruz or by the coast of the gulf, the coast cutting the lower portions of the plain being accentuated by a sand-bank 30 or 40 feet high, against which the surf thunders in nearly continuous roar, audible halfway or all the way to Pozo Escalante. A Seri trail skirts the crest of this bank, sending occasional branches into

¹ Both the routes were traversed by the expedition of 1895, the former from the headwaters of Rio Bacuache to the upper portion of its alluvial fan, and then from the abandoned Rancho Libertad on the lower portion of the fan across Desierto Encinas by way of Barranca Salina. In the northern crossing a light vehicle (the first to traverse this portion of the desert), drawn by four horses and aided by several horsemen, was taken from Rancho Libertad across the northern portion of Playa Noriega and thence up Arroyo Mitchell to a point midway between Barranca Salina and Johnson peak, and was brought back over the same route. The Encinas trail from Rancho San Francisco de Costa Rica was traversed four times each way by the same outfit, and once each way by the running gear of a heavy wagon carrying the rude craft (about 1,000 pounds in weight) in which the Seri waters were navigated, this vehicle being drawn by 8 to 12 horses, frequently changed. Typical aspects of both routes are shown in plate III, the upper figure representing the Encinas trail and the lower a distant view of Sierra Seri, taken from Playa Noriega, in the depths of Desierto Encinas.



SERI FRONTIER



SIERRA SERI FROM ENCINAS DESERT

the interior. At Punta Antigualla the bank expands and rises into a great mammillated shell-mound nearly 100 feet high, with several of the cusps occupied by more or less ruined jacales; and occasionally occupied houses occur midway thence to the southernmost point of Sierra Seri, and again at the base of the first spur east of Punta Ygnacio. Beyond Punta Antigualla the sweep of the waves is stronger than in Bahia Kino, and the coastal sand-bank is generally higher. Between the rocky buttresses of Punta Ygnacio and the next spur eastward the sand-ridge rises fully 50 feet above mean low tide, and here, as elsewhere, its verge is protected by a fog-fed chaparral thicket with occasional clumps of okatilla and other cacti. Behind the coast barrier lie lagoon-like basins, generally dry and floored with saline silt-beds, though sometimes occupied by briny pools formed through seepage during southwesterly gales; and there are physiographic indications that the northwestward extension of Laguna la Cruz formerly stretched some miles farther than now and lay in the rear of Punta Antigualla in such wise as to form a source of supply of the clam-shells of which the eminence is built.

2. Sierra Seri is a double range, divided mid-length by a broad saddle barely 2,000 feet in height.¹ Like other Sonoran ranges, the nuclear portions are exceedingly rugged and precipitous—at least two of its picachos shoot so boldly that they commonly seem to overhang, and have been called leaning peaks. In large part the precipices rise abruptly from a symmetrical dome molded by sheetflooding, much as the insulated buttes rise from the Bacuache fan in northeastern Seriland; so that the tract lying between Desierto Encinas and El Infiernillo is a composite of exceptionally precipitous and exceptionally smooth mountain slopes. One of the Seri trails radiating from Barranca Salina lies across the mid-sierra saddle; others push into several mountain valleys, and the largest leads to Tinaja Trinchera, at the base of Johnson peak, where there are a few low walls of loose-laid rubble, somewhat like those of the trincheras (entrenched mountains) farther eastward—the only structures of the sort seen in Seriland. Toward the southern end of the range lie various trails, the most conspicuous paralleling the coast, either near the shore or over the steep salients, according to the configuration; while here and there ruinous jacales a few yards from the coast attest sporadic habitation. The eastern shore of Bahia Kunkaak from Punta Ygnacio northward reveals a typical geologic section of the Sonoran province: the transgressing waves have carved in the granitic subterrane a broad shelf lying just below mean low tide and usually stretching several furlongs offshore; this shelf is relieved here and there by remnantal crags of obdurate rocks, cumbered by boulders and locally sheeted with sand and arkose derived from mechanically disintegrated granite; while the

¹The northern portion, as seen from the east, is shown in plate III; the southern portion, as seen from the west, appears in the upper part of plate IV, while the southwesternmost point is shown in the lower part of the same plate.

inner margin of the shelf is a sea-cliff, usually 30 to 50 feet high, of which the lower half is commonly granite and the upper half unconsolidated and recent-looking mechanical debris collected by sheetflood erosion. Sometimes the granite of the subterranean is replaced by volcanics; sometimes ancient and firmly cemented talus deposits separate the superficial mantle from the subterranean, as shown in the lower part of plate v; sometimes the line of sheetflood planation passes below tide-level, when the waves beat against the unconsolidated deposits in a deep embayment; sometimes the sharply defined planation surface ends abruptly at the sides of subranges or buttes shooting upward in the abrupt slopes characteristic of the sierra proper; yet this 10-mile stretch of coast is a nearly continuous revelation of the structure of sheetflood-carved plains and of modern marine transgression. The debris of the combined processes forms an abundant and varied assortment of boulders, cobbles, and pebbles, whence the inhabitants readily derive their simple implements without need for studied forethought or manual cunning.

The long sand-spit terminating in Punta Miguel and the shorter one terminating in Punta Arena are the product of geologically recent wave building, and consist of irregular series of V-bars, backed by lagoon-like basins and enclosing considerable bodies of brine in the central portions; and the bars and basins become successively higher outward, in such wise as to attest the secular subsidence of this coast. Several jacales are located on the higher portion of the southern sand-spit, midway between Punta Granita and Punta Miguel, while foot-paths traverse the flat and skirt the coast. Toward the terminal portion of the spit the sand is blown into hummocks, held by clumps of salt-enduring and sand-proof shrubbery; but there are no rancherias here, despite the fact that it is a natural point of embarkation—doubtless because no Seri structure could withstand the sand-drifting gales and storm inundations of this exposed spot. The more protected lagoons behind the outer bars harbor abundant waterfowl, within bowshot of shrub-clumps and dunes well adapted to the concealment of hunters, while the mud-flats open to the tide abound in clams and other edible things. The features of the Punta Miguel sand-spit are repeated with variations along the eastern shore of El Infiernillo; and Seri jacales, evidently designed for temporary occupancy, occur here and there, usually on higher banks above reach of the severer storms.

3. Tiburon island itself is apparently the chosen home of the Seri—a habitat to which the mainland tract is at once a dependency, an alternative refuge, and a circumvallation. Its dominant range, Sierra Kunkaak, mates Sierra Seri in its essential features, though the rocks are for the greater part ordinarily obdurate eruptives rather than exceptionally obdurate granites, as in the mainland sierra; accordingly the range is somewhat lower and broader, while the sheetflood sculpture, with its sharp transition into precipitous cliffs, is somewhat less trench-



SIERRA SERI FROM TIBURON ISLAND



PUNTA YGNACIO, TIBURON BAY

ant. Sierra Menor is a third term in the mountain series, in structure and geomorphy as in altitude; while the interior plain is a homologue of that portion of Desierto Encinas lying north of Playa Noriega—i. e., of its (potentially) free-drained portion. Almost the entire perimeter of Tiburon is suffering marine transgression, and is faced with seacliffs overlooking wave-carved shelves; and in both form and structure the greater part of the coast repeats, with minor variations, the features of the mainland coast from Punta Ygnacio northward. Partly because of the superior magnitude and height of its debris-yielding sierra, partly because of protection from the wave-beat of the open gulf, the eastern shore is skirted with a talus-shape slope, usually two to four miles wide; and while there are unmistakable evidences of sheetflood carving in the higher portions of this plane, the coastal cliff commonly reveals nothing but heterogeneous debris, sometimes rising thirty or forty feet above tide. Somewhat the greater part of the volume of this debris is fine—i. e., sand and silt and nondescript rock-matter; but there is always a considerable element of larger rock-fragments, which gather along the shore in a pavement of boulders and cobbles (upper figure of plate V). These coarse materials—important factors in aboriginal industry—are harmoniously distributed; more conspicuously on the ground than on the map, the coast is set with salients (of which Punta Narragansett is a type), consisting merely of exceptional accumulations of debris from gorges in the sierra and from shallow arroyos, or pebble washes, traversing the coastwise plain. These salients owe their prominence partly to the relative coarseness, partly to the abundant supply, of fragmental material from the heights; and about their extremities the beach is paved with boulders, which grade to cobbles or even to pebbles along the reentrant shores on either hand. This distribution of cobbles is one of the conditions governing the placement of Seri rancherias; and in many cases the jacales are located, either singly or in groups, where the coastal salients and reentrants meet, and where there is an abundant supply of cobbles of convenient size and wave-tested hardness.

The coastwise plain skirting eastern Tiburon has a few wave-built projections analogous to those east of El Infiernillo; the most conspicuous of these are Punta Tormenta, Punta Tortuga, and Punta Perla with its tide-swept extensions, Bajios de Ugarte. All of these are located primarily by sierra-fed arroyos, but all are greatly extended by wave-borne material laid down along lines determined by the prevailing currents of this best-protected portion of the coast. The long outer face of Punta Tormenta, shaped by the storms of Bahia Kun-kaak, is strikingly regular and symmetric; its broad extremity and inner face are diversified by subordinate bars and lagoons, evidently tending to connect with the main coast toward Punta Tortuga, and thereby to transform the whole of Rada Ballena into a lagoon. Already the narrow embayment is so shallow that, although a com-

portable haven at high tide, it is mostly mud-flat and sand-waste at extreme low tide—a condition which explains the stranding of an 80-foot whale in this treacherous harbor about 1887. The rada is between two and three miles in length. It abounds in marine life of kinds preferring quieter waters: clams are plentiful in its mud-flats, a sponge lines portions of the bottom toward its inner extremity, oysters cluster numerously on bowlders and on the mangrove-like roots and trunks of a large shrub along the outer shore, and various fishes find refuge here from the fierce currents and the hungry sharks and porpoises of the open strait; these and other creatures form food for innumerable waders and other water-fowl that seek shelter in the quiet bay, which is still further protected by salt-enduring shrubbery on the bars of the point and by the shrubby thickets and wave-cast banks and wind-built dunes on the mainland side.

The combination of conditions renders this portion of the Tiburon coast the optimum habitat of the Seri Indians. There are, indeed, no houses or other traces of permanent habitation on Punta Tormenta itself, which is not only swept by gales but must sometimes be inundated by gale-driven waters at high spring tide; but at the inner end of the long sand-spit, and also on the mainland opposite the outer portion of Rada Ballena, there are extensive and well-kept rancherias, capacious enough to accommodate comfortably thirty or forty Seri families, i. e., 150 or 200 persons. Toward its landward end the sand-spit is built largely of pebbles and cobbles, of which thousands of tons are adapted to industrial use; sea-food is practically unlimited and is readily taken; water-fowl literally crowd the protected rada within arrow-shot of natural cover; the outer slope of the bar is admirably suited for landing and embarking balsas in calm weather, while the bay is an ideal harbor for the portable craft, and the shrub-grown shores give unlimited opportunity for concealing them when not in use; the dunes and banks are high enough to protect the low jacales from storm-winds, while the abundant sponges and turtle-shells afford material for thatching and shingling the more exposed walls and roofs; and finally, it is but a favorite distance (about 4 miles) to the permanent fresh water of Tinaja Anita. From this Seri metropolis well-trod trails radiate toward all other parts of the island; the best-beaten leads to the tinaja, sending branches into all the neighboring gorges, in which game is sometimes taken; next best-worn is the trail laid across Sierra Kunkaak to strike Arroyo Carrizal mid-length of its permanently wet portion; others pass northward to rancherias at different points on the coast, and still another skirts the coast southward by several smaller rancherias to the considerable jacal collection near Punta Narragansett—this, like other longshore routes, having alternative trails, the evanescent fair-weather one following the beach, while the permanent path threads the thorn-set thickets marking the crest of the sea-cliff or cuts across the longer salients. The Narragansett rancheria is



WESTERN SHORE OF TIBURON BAY



EASTERN SHORE OF TIBURON BAY

also a center for radiating trails, the best-beaten of these leading toward the fresh waters of Tinaja Anita and Arroyo Carrizal; and even the rancherías half-way thence to Punta Mashém send their most permanent paths over 15 miles of intervening ranges and spall-strewn valleys toward the same waters. According to Mashém's cautious statements, there is a minor Seri metropolis at the northwestern spur of Sierra Kunkaak, within reach of Pozo Hardy and Arroyo Agua Dulce, and two or three smaller rancherías along the western shore; but these were not reached by the 1895 expedition.

4. The seas washing Seriland are notably troubled by tides and winds. Gaping toward the Pacific, and narrowing and shoaling for the 800 miles of its length (measured from midway between Islas de Tres Marias and Cabo San Lucas), Gulf of California approaches Bay of Fundy, Bristol channel, and Broad sound as a tide accumulator; while the semidiurnal sweep of the waters in the upper half of the gulf is conditioned by the constriction of the basin to a fraction of its average cross-section at the narrows between Isla Tiburon and Punta San Francisquito. Toward the head of the gulf the ordinary spring tides range from 20 to 25 feet, and may be much increased by favoring winds; the debacles culminate there, but the currents culminate off Seriland in the great tide-gate half dammed by the islands of Tiburon, San Esteban, San Lorenzo, and Salsipuedes,¹ with their marine buttresses, and through the breaches of Pasaje Ulloa, Estrecho Alarcon, and Canal de Salsipuedes flow, four times daily, some two or three cubic miles of water in tremendous tidal floods, probably unsurpassed in vigor elsewhere on the globe. Naturally the islands and the adjacent coasts afford extraordinary examples of marine transgression; and while exceptional wave-work is a factor, the transgression is undoubtedly due mainly to the extraordinary tidal currents in this gateway of the gulf. The fierce currents and the frequent storms of the region condition local navigation, and have undoubtedly contributed to the development of the peculiarly light, strong, and serviceable water-craft of the aboriginal navigators among the islands.

El Infiernillo derives its distinctive characteristics largely from the local character of the tides. Bahia Kunkaak is a funnel-shape embayment so placed as to catch half the volume of the incoming tide and to

¹ Originally the name Islas Sal-si-puedes (Get-out-if-canst) was applied to the various islands of this gateway of the gulf, including San Lorenzo, San Esteban, and San Agustin (now Tiburon), together with the smaller islets, as shown in the map of Padre Fernando Consag (in *Noticia de la California y de su Conquista*, etc., por el Padre Miguel Venegas, 1757, tomo III, p. 194); and Padre Consag's account of the currents encountered in 1746 explains the designation: "The great sea which runs here even in fair weather would not allow us to stay, and it was with great difficulty we took in a little water. We now attempted to weather the Cape of San Gabriel de Sal-si-puedes, so greatly dreaded by seamen on account of those islands, several contiguous points of land and many ledges of sunken rocks extending a great way from the land. Here the sea is so agitated by the current that a gale or a calm makes but little difference" (English translation of Venegas' *Noticia*, titled *A Natural and Civil History of California*, 1759, vol. II, pp. 312-313). Hittell speaks of "the group of islands known as Salsipuedes, the largest of which is now called Tiburon" (*History of California*, 1898, vol. I, p. 225). Dewey restricted the name to a single small island near the Baja California coast. Further references to the islands and their designations are noted postea, p. 65.

concentrate the flow into a bore hurtling through Boca Infierno and thence throughout the shoaling strait with greatly accelerated velocity; meantime the body of the tidal stream is diverted around Tiburon, and then enfeebled in its northward flow by the expansion of the gulf above the Tiburon-San Francisquito gateway, so that the entire strait is flooded (to the limit fixed by the capacity of Boca Infierno) before the main tide flows into its head past Isla Patos and through Bahia Tepopa; and with this unobstructed inflow the strait is reflooded with a counterbore, whereby the waters are heaped and pounded into an unstable, swirling, churning mass.¹ The flooding is little less than catastrophic in magnitude and suddenness; indeed, the volume of water in the body of the strait between Punta Perla and Boca Infierno

¹ Unquestionably the clearest view of El Infiernillo ever enjoyed by Caucasian eyes was that of Messrs Johnson and Mitchell from the culminating point of Sierra Seri (Johnson peak), which they occupied for about twenty-three hours on December 7 and 8, 1895. Mr Johnson's notes on the appearance of the strait are as follows: "On the occasion of the ascent of Sierra Seri, which rises from the coast, shutting off the view of Isla Tiburon from the desert on the east, I received a striking impression of the elaborate and beautifully symmetrical plan of the long swirling currents of El Infiernillo. The climb had been made from the east direct to the summit peak, so that the first sight of both island and gulf was not only from close at hand, but from an elevation of about a mile. The crest of the ridge was reached at the instant of sunset, and the spectacle of the innumerable current-markings was brief. Our position was nearly opposite the northern end of the strait; and its elevation was so great that the opposite mainland and island shorelines were seen in map effect rather than in perspective. The entire strait, to its northern end at Punta Perla, was in the shadow of the island; and the current design was revealed only in the shadow. At the shadow-margin extending from the northern tip of the island the lines were sharply cut off; and beyond, along the westward bend of waters forming Bahia Tepopa and opening into the gulf in full sunlight, there was no suggestion of them. Within the shadow the effect was that of a film of oil on a water-surface which had been stirred and allowed to come to rest—though the regularity of the lines was as though the stirring had been orderly. Not the slightest motion was perceptible from the peak during the minute or two that the spectacle lasted before the sun disappeared and twilight fell, though the suggestion from configuration alone was that of violent swirling. The general movement was evidently southward toward Boca Infierno, and the swirls were apparently the result of frictional resistance along both shores; the system of curving lines as a whole was very much that which would be presented by a broad feather thrust into a bottle. There were central lines in great number, somewhat sinuous though never crossing, diverging one by one toward the shores on either hand, where they curved backward with complex interferences in large reversing arcs and many minute circlings. The straightening out of the curves in perspective was quite perceptible toward Boca Infierno, and beyond it was pronounced. The air appeared to be still, so that the current pattern was not at all obscured by waves; and the spectacle of the broad strait, appearing almost beneath me, incised with a crowded design of sweeping fine lines, the delicate clearness of which recalled a steel engraving, was peculiarly impressive. That we had been fortunate in the moment of reaching the summit was apparent next day. The spectacle was, indeed, repeated at sunrise and for a short period thereafter, though the general design was markedly different, and less intricacy of pattern was discernible, while the general effect was comparatively vague; perhaps the shadow of Sierra Seri was too heavy, or, more probably (as was my impression at the time), our position was not favorable for that direction of illumination. In full light during the day up to the hour of our departure in late afternoon, no hint or vestige of the current design remained. It was evident that the lines were brought out with especial clearness by the favorable illumination and comparative stillness of air; and it was particularly evident that the lines marked movements in the water, even if there were corresponding air-currents, since they harmonized perfectly with the configuration of the shores and with the trend of spits and bars and offshore markings seen through the shallow waters, especially toward the northern end of the strait. The accord between shore curves and the current lines seen in the evening indicated a southward motion much more vigorous than the reverse movement witnessed next morning; for the marked variation in the design noted in the morning was of a character strongly suggesting a reversed movement of the water, while the faintness of the markings then may perhaps have been due to comparative feebleness of current rather than to unfavorable lighting. Certainly the close agreement between the elaborate system of markings, so clearly revealed in the evening, and the prevailing curves of the shores would seem to indicate unmistakably that, whatever the direction and strength of flow, the markings were a product of current motion."

is approximately doubled at neap tide and tripled at spring tide twice in each twenty-four hours. Then, as the crest of the main debacle advances into the upper gulf beyond Punta Tepopa, the trough of the ebb is already approaching the Tiburon-San Francisquito constriction; and even before the final flooding of El Infiernillo from the north is completed, the waters of Bahia Kunkaak are receding and a tiderip is tearing through Boca Infierno at a rate sufficient to half empty the reservoir of its accumulated volume before the ebb trough has rounded the island to the head of the strait. Thus the effect of the exceptional tides of the gulf and the peculiar configuration of Seriland is to concentrate and accentuate tidal currents in El Infiernillo, and to convert the channel into a raceway for nearly continuous tide rips. According to Dewey, the spring tides are 10 feet and the neaps 7 feet about the northern end of the strait;¹ in December, 1895, the tides about Punta Blanca and Punta Granita were roughly determined as 13 or 14 feet at spring and 7 or 8 at neap, the range varying considerably with the direction and force of the wind; and the consequent current through Boca Infierno was estimated at 4 to 8 miles per hour, the higher velocity of course coinciding with the spring tide. The change in direction of the current is almost instantaneous—indeed, the run is in opposite directions on opposite sides of the narrow strait when the wind sets obliquely—so that the tidal flow is practically continuous. The currents are of course slacker in the body of the strait, but even here suffice to transport coarse sediments; and it is to this agency that the “shoals and sand spits” noted by Dewey² and the maintenance of a deep channel through Boca Infierno are chiefly to be ascribed. The materials of Punta Tormenta and Punta Tortuga attest the transportation of pebbles up to 3 or 4 inches in diameter by the combined work of waves and tidal currents.

Like other mountain-bound water bodies, the portion of the gulf washing Seriland is exceptionally disturbed by winds of given velocity by reason of the high angle of incidence; and moreover the exceptionally prominent local configuration disturbs the atmospheric currents in a manner somewhat analogous to that in which the tidal currents are disturbed; so that the winds are highly variable but generally strong. Under the combined action of tide and wind the waters are normally ruffled; choppy seas freely flecked with whitecaps are rather the rule than the exception,³ and are replaced less frequently by calms than by steadier billows breaking in continuous surf on sand-beaches (figure 5) and dashing into foam-flecked and rainbow-tinted spray-jets, bathing the rocky cliffs for 50 feet above their bases. Sometimes the wind stills suddenly, when the sea sinks to rhythmic swells, soon extinguished by reaction from the irregular shores and by the interference of tide-currents; but the swell seldom dies away before the gale springs again.

¹ Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation, 1880, p. 142.

² Op. cit., p. 143.

³ A stiller and navigable condition of the sea is shown in the view of Punta Ygnacio, plate IV.

The broad valley between Sierras Seri and Kunkaak, bottomed by El Infiernillo, is especially beset by fierce and capricious gales; the general atmospheric drift is disturbed by the leading and lesser sierras, as well as by temperature convection from the gulf, and eddies are developed in such wise as to send air-currents directly or obliquely up or down the valley. These local or sublocal winds are characteristic. Judging from observations covering several weeks, the valley is wind-swept longitudinally for an average of eighteen or twenty hours daily, the winds ranging from strong breezes to gales so stiff as to load the air with sand ashore and spray asea; and even the calms may be broken



FIG. 5—Embarking on Bahía Kunkaak in la lancha *Anita*.

any minute by sudden gusts and williwaws, passing rapidly as they arrive. Not only waves but wind itself combines with tides to shape the structural features of the valley; nowhere within it do flour-fine sands like those of Desierto Encinas occur, save as a hardly perceptible constituent of the dunes and banks of coarser sand—they have been blown into the sea or beyond the limits of the valley. Throughout the strait so expressively named by its explorers, the capriciousness of the sea culminates, despite the shoalness and the protection from easterly and westerly winds; the storm currents and tide-currents are half the time opposed, raising breakers even when the air is nearly still; eddies and whirls and cross-currents arise constantly, and even at the stillest

hours tumultuous waves come and go sporadically, while about the mile-wide boca the choppy sea sometimes takes the form of spire-like jets, spurting 5 or 10 feet high and breaking into aigrettes of glittering spray in most unwaterlike and wholly indescribable fashion. Dewey described the strait as "unsafe for navigation by any except the smallest class of vessels"; it is safe, indeed, only for portable and indestructible craft like the Seri balsas, which may be put off or carried ashore at will by craftsmen willing to wait for wind and tide, and unpossessed of impedimenta of a sort to be injured by wetting. Of such an environment the balsa is a natural product.

The adjunct islets of Seriland are miniatures of Tiburon in all essential respects, save that they are without fresh water. The largest is San Esteban, a somewhat complex butte rising sharply from the waters in a nearly continuous sea-cliff recording vigorous work by storms and tides; it is occasionally visited by the Seri, chiefly in search of water-fowl and eggs. The most important of the series in Seri economy and mythology is Isla Tassne, off the mouth of Bahia Kino; it is a rugged butte some 600 feet high, rising in wave-cut cliffs on the sea side and pedimented by low spits and banks of sand toward the lea; the sand-banks are literally flocked with pelicans, while other fowl cover the flatter ledges and crowd the crannies of the pinnacle. Isla Turner is a somewhat smaller and still more rugged butte, bounded on both sides by precipitous cliffs, while Roca Foca is merely a great rock shelving upward from the storm-swept waters off the most exposed angle of Tiburon; in the crannies of the former birds nest abundantly, while the lower ledges of both are haunted by seals. Isla Patos, north of Tiburon, is a breeding-place for different water-fowl, and is especially noted as a refuge for ducks; it, too, is for the most part a rocky butte, with a sandy shelf at the eastern base. Beyond San Esteban lies the similar but smaller Isla San Lorenzo, while Isla Salsipuedes and a few other islets stretch thence northward half way to the southern point of Isla Angel de la Guarda, the second-largest island of the gulf. San Lorenzo and the smaller islets are occasionally visited by the Seri, partly for a mineral pigment used in face-painting, partly in quest of game; and they sometimes push on to the larger island to enjoy its fairly abundant game, including the easily taken iguana, amid the ruins of an ancient culture apparently akin to that of southern Mexico. Even the most frequented islets, Tassne and Patos, can be reached only by crossing miles of open sea; but in their way the Seri are as canny navigators as they are skilful boat-builders—it is their habit to hug the shore in threatening weather, to await wind and tide for hours or days together, to set out on distant journeys only when all conditions favor, and in emergency to seize inspiration from the storm like the vikings of old, and bend supernormal power to the control of their craft.

Summarily, the prevailing features of Seriland may be said to be

characterized by extreme development or intensity, many of them being of such sort as to be adequately described only by the aid of strong comparatives or superlatives. Seriland is the most rugged portion of piedmont Sonora, and is bounded by its most forbidding desert; the territory is nearly if not quite the most arid and inhospitable of the Sonoran province; the diurnal and sporadic temperature-ranges are apparently the widest, and the gales and other storms apparently the severest of the entire province; the flora is among the most meager and least fruitful, and the mountains are among the craggiest of the continent; the tides are among the strongest and the tidal currents among the swiftest of the world; and, as shown by the limited direct observations and by the extraordinary marine transgression, the waters are among the most turbulent known. At the same time, the waters washing Seriland are among the richest of America in sea-food, so that the habitat is one of the easiest known for a simple life depending directly on the product of the sea. It is but natural that these extreme factors of environment should be measurably reflected in pronounced characteristics on the part of the inhabitants.

SUMMARY HISTORY

There is some doubt as to who was the first among the Caucasian explorers of the Western Hemisphere to set eyes on the Seri Indians. Nuño de Guzman, rival of Cortés and invader of Jalisco and Sinaloa, must have approached the southern boundary of Seri territory about 1530, though there is no record of contact with these tribesmen. Diego Hurtado de Mendoza, one of Cortés' captains, coasted along southern Sonora in 1532 to a point considerably beyond Rio Yaqui, where he was massacred on his return, and hence left no record of more northerly natives.¹ Both of these pioneers must accordingly be eliminated from the list of probable discoverers of the Seri.

In the course of their marvelous transcontinental journey, Alvar Nuñez Cabeza de Vaca and his companions also approached Seriland, and apparently skirted its borders shortly before meeting Captain Diego de Alcaraz, of Guzman's party; this was in April, 1536, according to Bandelier.² Vaca wrote: "On the coast is no maize: the inhabitants eat the powder of rush and of straw, and fish that is caught in the sea from rafts, not having canoes. With grass and straw the women cover their nudity. They are a timid and dejected people."³ He added half a dozen ambiguous sentences, of which only a part, apparently, refer to the "timid and dejected people"; half of these describe a poison used by them "so deadly that if the leaves be bruised and steeped in some neighboring water, the deer and other animals drinking it soon burst". The people were identified as Seri (Ceri) by Buckingham Smith and General Stone,⁴ and the identification may be considered as strongly probable, provided the Tepoka be classed with the Seri.

The next Caucasians to approach Seriland appear to have been the two Spanish monks, Fray Pedro Nadal and Fray Juan de la Asuncion, who, in 1538, sought to retrace Vaca's route, and traveled northward to a river somewhat doubtfully identified as the Gila;⁵ but the meager accounts of this journey contain no clear reference to the Seri Indians.

On March 7-19, 1539, the Italian friar Marcos de Niza left San Miguel de Culacan under instructions from the Viceroy, Don Antonio

¹Theodore H. Hittell, *History of California*, 1898, vol. i, pp. 43-44.

²*Contributions to the History of the Southwestern Portion of the United States* (Hemenway Southwestern Archæological Expedition), *Papers of the Archæological Institute of America*, American series, v, 1890, p. 44.

³*Relation of Alvar Nuñez Cabeça de Vaca*, translated from the Spanish by Buckingham Smith; New York, 1871, p. 172.

⁴*Ibid*, p. 178.

⁵Cf. Bandelier, *Magazine of Western History*, iv, 1886, p. 660.

de Mendoza, to explore the territory traversed by Vaca, under the guidance of the negro Estevanico, the only one of Vaca's three companions remaining in Mexico; in good time he reached a point probably not far from the center of the present state of Sonora, whence messengers were sent coastward to return duly accompanied by certain "very poor" Indians wearing pearl-oyster (?) ornaments, who were reputed to inhabit a large island (almost certainly Tiburon) reached from the mainland by means of balsas. Bandelier identified these coastwise Indians with the Guayma tribe, a supposed branch of the Seri;¹ but if the "large island" were Tiburon, it would seem more probable that the Indians belonged to the tribe now known as Seri, while both description and location suggest the Tepoka. This record is of questionable weight, partly by reason of the doubtful identification of the Indians, and partly because the friar's itinerary was found to be misleading by his immediate successors, because of the fact that portions of his narrative were based on hearsay; though it is just to note that Bandelier, after critical study, deemed the record about as trustworthy as others of the time, and to add that the disparagement of Niza's discoveries by his followers was in accord with the fashion of the day—indeed it was little more severe relatively than the criticism of the strikingly trustworthy Ulloa by his first follower, Alarcon.

On July 8-19, 1539, according to the collection of Ramusio, three vessels sent out by Cortés to discover unknown lands—"Of Which Fleete was Captaine the right worshipfull knight Francis de Villosa borne in the Citie of Merida"—sailed from Acapulco.² Skirting the mainland northwestward, they explored Mar de Cortés, or Gulf of California; and on September 24 (as fixed by interpolation from Ulloa's excellent itinerary) they descried and described the features of the coast in such fashion as to locate their vessels (one was already lost) off the southern point of Tiburon, and in sight of the islands of San Esteban and San Lorenzo, as well as locally prominent points on the mainland of Lower California. Here they "discerned the countrey to be plaine, and certaine mountaines, and it seemed that a certaine gut of water like a brooke ran through the plaine" (p. 322). Judging from other geographic details, this "gut of water" was certainly the tide-torn gateway now named Boca Inferno; while the next day's sailing (it is noteworthy that this was "north" instead of northwestward as usual) carried them by "a circuit or bay of 6 leagues into the land with many cooues or creeks", evidently Bahia Tepopa with the northern end of the turbulent strait El Infiernillo. The record shows clearly that Ulloa discovered Tiburon, but failed (quite naturally, in view of the route pursued and the peculiar configuration at both extremities of the strait) to perceive its insular character. No mention is made of inhabitants or habitations on this land-mass, though both are described on the

¹ Ibid, pp. 661-663; Papers of the Archæological Institute of America, American series, v, p. 118.

² The Voyages of the English Nation to America, collected by Richard Hakluyt and edited by Edmund Goldsmid, 1890, vol. III, p. 317.

neighboring island of Angel de la Guarda in terms that would be applicable to the Seri.

On Monday, February 23, 1540, according to Winship,¹ Captain-General Francisco Vazquez Coronado set out on his ambitious and memorable expedition to the Seven Cities of Cibola. His course lay from Compostela along the coast of Culiacan, and thence northward through what is now Sinaloa and Sonora. On May 9–20, 1540, Hernando de Alarcon set sail on the ancillary expedition by sea; he followed the coast from Acapulco to Colorado river, and although he undoubtedly saw and was the first to name Tiburon,² and claimed to have “discovered other very good hauens for the ships whereof Captaine Francis de Vllua was General, for the Marquesse de Valle neither sawe nor found them”,³ he made no specific record of any of the features of Seriland or of contact with the Seri Indians. Meantime Coronado’s forces were divided, a considerable part of the army falling behind the leader; and some time during the early summer the belated army, under Don Tristan de Arellano, founded the town of San Hieronimo de los Corazones, which in the following year (1541) was transferred to a place in Señora (Sonora) not now identifiable. From Corazones Don Rodrigo Maldonado went down to the seacoast to seek the ships, and brought back with him “an Indian so large and tall that the best man in the army reached only to his chest”, with reports of still taller Indians along the coast.⁴ It is impossible to locate Maldonado’s route with close accuracy, but in view of geographic and other conditions it is evident (as recently shown by Hodge⁵) that he must have descended Rio Sonora and approached or reached the coast over the broad delta-plain of that stream south of Sierra Seri, and thus within Seri territory. The reported gigantic stature practically identifies the Indians visited by him with the Seri, since no other gigantic tribes were consistently reported by explorers of western North America, and since the 6-foot Seri warriors, with their frequent Sauls of greater stature, are in fact gigantic in comparison with the average Spanish soldiery of earlier centuries. There are indications that the fame of these giants of the Southern sea spread to Europe and filtered slowly throughout the intellectual world, and that the fancy-clothed colossi grew with their travels, after the manner of their kind—indeed, there is no slender reason for opining that these half-mythical islanders were the real originals of Jonathan Swift’s Brobdingnagians,⁶ despite his location of their fabled land a

¹ The Coronado Expedition, 1540–1542, Fourteenth Annual Report of the Bureau of Ethnology, 1896, p. 382.

² As a harbor or anchorage marked “del Tiburon” on the map of “Domingo del Castillo, Piloto”, drawn in 1541, and reproduced in *Historia de Nueva-España, escrita por su esclarecido Conquistador Hernán Cortés, aumentada con otras documentos, y notas, por el ilustrissimo Señor Don Francisco Antonio Lorenzana, Arzobispo de Mexico*; Mexico, 1770, p. 328.

³ The Voyages of the English Nation to America, vol. iv, p. 6.

⁴ Winship, *op. cit.*, p. 484.

⁵ Coronado’s March to Quivira, in J. V. Brower, Harahey (*Memoirs of Explorations in the Basin of the Mississippi*, vol. II), 1899, p. 36.

⁶ Cf. *The History of Oregon, California, and the other Territories on the Northwest Coast of North America*, by Robert Greenhow, 1845, p. 97; *History of California*, by Théodore H. Hittell, 1898, vol. I, p. 149.

few degrees farther northward on the long-mysterious coast below the elusive "Straits of Anian".

About the middle of September, 1540, Captain Melchior Diaz, then in command at Corazones, selected 25 men from the force remaining at that point, and set out for the coast on what must have been one of the most remarkable, as it is one of the least-known, expeditions in the history of Spanish exploration; for he traversed either the streamless coast or the hardly more hospitable interior through one of the most utterly desert regions in North America, from the lower reaches of Rio Sonora to the mouth of the Colorado. The record of this journey is meager, ambiguous, and apparently inconsecutive; it indicates that he encountered the Indian giants seen by Maldonado, but confused them with the Indians of the Lower Colorado. On the return journey Diaz lost his life through an accident, and his party reached Corazones on January 18, 1541, after encountering hostility from Indians not far from that settlement. Word was sent to Coronado, then in winter quarters on the Rio Grande, who dispatched Don Pedro de Tovar to the settlement for the purpose of punishing the hostile natives; he, in turn, sent Diego de Alcaraz with a force to seize the "chiefs and lords of a village". This Alcaraz did, but soon liberated his prisoners for a petty exchange. "Finding themselves free, they renewed the war and attacked them, and as they were strong and had poison, they killed several Spaniards and wounded others so that they died on the way back. . . . They got back to the town, leaving 17 soldiers dead from the poison. They would die in agony from only a small wound, the bodies breaking out with an insupportable pestilential stink."¹

The Coronado expedition had still further experience with (evidently) the same Indians; for as the army approached Corazones on the return a soldier was wounded, and was successfully treated, according to the record, with the juice of the quince. "The poison, however, had left its mark upon him. The skin rotted and fell off until it left the bones and sinews bare, with a horrible smell. The wound was in the wrist, and the poison had reached as far as the shoulder when he was cured. The skin on all this fell off."²

There is some question as to the identity of the Indians met by Diaz's men, Alcaraz and his force, and the Coronado army near Corazones; but various indications point toward the Seri. In the first place, the several Indian settlements mentioned in the records define what must have been then, as it was two centuries later, the Seri frontier, beyond which lay the "despoblado" of Villa-Señor, i. e., the immense area hunted and harried by roving bands from Tiburon; so that the Seri must frequently have crossed the paths pursued by the Spanish pioneers. In the second place, the accounts themselves seem to be typical records of contact with Seri Indians, which might be repeated for each

¹ Winship, *op. cit.*, p. 502.

² *Ibid.*, p. 538.

subsequent episode in their history or century in time. The description of the effect of the poison is especially suggestive of the Seri; as pointed out on a later page, the Seri arrow-venom is magical in motive, but actually consists of decomposing and ptomaine-filled organic matter, so that it is sometimes septic in fact, while the arrow-poison of the neighboring Opata, Jova, and other Piman tribes was (so far as can be ascertained) vegetal; and these accounts seem to attest septic poisoning rather than the effects of any known vegetal toxic.¹

Such (assuming the validity of the several identifications) are the earliest records concerning the truculent tribesmen and the desolate district known centuries later as the Seri and Seriland.

About 1545 began the Dark Ages in the history of northwestern Mexico; the excursion of Guzman, and the journeys of Cabeza de Vaca and Friar Marcos and of Coronado himself, died out of the memory of the solitary adventurers and scattering settlers who slowly infused Spanish culture and a strain of Caucasian blood into the Sonoran province; even the route taken by Coronado's imposing cavalcade was lost for centuries, to be retraced only during the present generation, largely through the determinations of Simpson, Bandelier, Winship, and Hodge.² It is true that Don Francisco de Ibarra penetrated the territory in 1563, and remained until rumors of gold in other districts drew him elsewhere; it is also true that Captain Diego Martinez de Hurdaide pushed into the province in 1584, and entered on a career of subjugation, waging persistent war with the Yaqui, which resulted in the acquisition of the territory of Sonora by treaty April 15, 1610;³ yet few records of exploration or settlement were written before the advent of the Jesuit missionaries, toward the end of the seventeenth century.

Still more astounding was the eclipse of knowledge of the gulf. Despite Ulloa's survey of the entire coast, recorded in an itinerary so detailed that every day's sailing may readily be retraced, and despite Alarcon's repetition of the surveys and extension of the discoveries far up Rio Colorado (where his work was verified by that of Melchior Diaz), a mythic cartography arose to shadow knowledge and delude exploration for a century and a half; for "upon the authority of a Spanish chart, found accidentally by the Dutch, and of the authenticity of which there never were, or indeed could be, any proofs obtained, an opinion prevailed that California was an island, and the contrary assertion was treated even by the ablest geographers as a vulgar error";⁴ and a mythic strait formed by cartographic extension of the Gulf of California indefinitely northward haunted the maps of the seventeenth century. This error was adopted by various geographers, including Fredericus

¹ It should be noted that Mr. F. W. Hodge, whose large acquaintance with the Southwest and its literature gives his opinion great weight, is inclined to class the Indians in question as Opata.

² *Op. cit.*, pp. 29-73.

³ *Sonora Histórico y Descriptivo*, por F. T. Dávila, 1894, p. 8.

⁴ *A Natural and Civil History of California*; translated from the original Spanish of Miguel Venegas; London, 1759, vol. I, preface.

de Witt in 1662, Peter van der Aa in 1690, and even Herman Moll so late as 1708; but it was consistently rejected by Guillaume Delisle and other French geographers. The myth was finally punctured by Padre Kino in 1701; though even he and all his erudite co-evangels were apparently unaware that his observations only verified those of Ulloa, Alarcon, and Diaz.

During the stagnant sesquicentury 1545-1695 there was little record of the Seri Indians, though that little indicates recognition of their leading characteristics and their insular habitat. Writing especially of the Yaqui before 1645, Padre Andrés Perez de Ribas declared (freely translated):

There is information of a great people of another nation called Heris; they are excessively savage, without towns, without houses, without fields. They have neither rivers nor streams, and drink from a few lagoonlets and waterholes. They subsist by the chase, but at harvest time they obtain corn by bartering salt extracted from the sea and deerskins with other nations. Those nearest to the sea also subsist on fish; and it is said that there is, in the same sea, an island on which others of the same nation live. Their language is exceedingly difficult.¹

The same author mentions cannibalism among the aborigines of northwestern Mexico, saying:

The vice of those called anthropophagi, who eat human flesh, introduced by the devil, enemy of the human genus, among nearly all these nations during their heathenism, is more or less common. In the Acaxee and mountains this inhuman vice is customary as eating of flesh obtained by the chase; it is of daily occurrence among them; just as they sally in chase of a deer, they go out over mountains and fields in search of enemies to cut in pieces and eat roasted or boiled.²

There is nothing to indicate that the anthropophagy was confined to, or even extended to, the Seri—a fact of interest in connection with later opinion. Ribas' reference to an island inhabited by the Heris (Seri) indicates that the occupancy of Tiburon was fully recognized by the native tribes of the region.

Throughout the seventeenth century the western coast of Gulf of California, and in lesser degree the eastern coast also, became famous for pearl oysters, and expeditions were sent out and fisheries established at different times. The earliest of these expeditions was that of Captain Juan Iturbi in 1615; he sailed well up the gulf, reaching latitude 30° according to his reckoning (though the accounts imply between lines that he turned back at the Salsipuedes), collecting many pearls along the western coast "so large and clear that for one only he paid, as the King's fifth, 900 crowns";³ and on his return he carried the fame of the Californian pearls to Ciudad Mexico, whence it resounded to Madrid and reverberated through all Europe. One of the more noteworthy

¹ *Historia de los Trivmphos de Nvestra Santa Fee entre Gentes las mas Barbaras y Fieras del Nueuo Orbe*; Madrid, 1645, p. 358. The "Heris" are identified as Seri by Bandelier (*Final Report of Investigations among the Indians of the Southwestern United States*, in *Papers Arch. Inst. Am.*, American series, III, 1890, p. 74).

² *Op. cit.*, p. 11.

³ Venegas, *op. cit.*, vol. I, p. 182.

pearl-gathering expeditions was that of Admiral Pedro Portel de Casanate, which covered several years; he "took a very careful survey of the eastern coast of the gulf" in 1648, but was deterred from establishing a garrison by "the dryness and sterility of the country";¹ yet neither this voyage nor any of the others appears to have resulted in any considerable rectification of the maps, or in valuable records relating to the aboriginal inhabitants. Various records indicate, however, that both pearl fishers by sea and gold seekers by land must have met the warlike Seri—and sometimes survived to enrich the growing lore concerning the tribe, and to establish the existence of their island stronghold.

New light dawned on Sonoran history with the extension of evangelization by the Order of Jesuits into that territory under the pilotage of Padre Eusebio Francisco Kino (Kaino, Kuino, Kühn, Kühne, Quino, Chino, etc.), who sailed from Chacala, March 18, 1683,² for California, with the expedition of Admiral Isidro Otondo y Antillon. This expedition failing, the padre returned to the mainland in 1686, and during the same year obtained authority and means for establishing missions in Sonora, of which one was to be "founded among the Seris of the gulf coast".³ Although the record of the padre's movements is hardly complete, it would appear that several years elapsed before he actually approached, and also (contrary to the opinion of two centuries) that he never saw, the real Seri habitat. According to the anonymous author of "Apostolicos Afanes" (identified by modern historians as Padre José Ortega), Padre Kino made many journeys over the inhospitable wastes now known as Papagueria during the years 1686–1701,⁴ and must have seen nearly the whole of the northern and eastern portions of the territory; but only a single journey led him toward Seriland. In February, 1694, he, with Padre Marcos Antonio Kappus, Ensign Juan Mateo Mange (chronicler of this expedition), and Captain Aguerra, set out for the coast; and Mange's itinerary is so circumstantial as to locate their route and every stopping place, with a possible error not exceeding 5 miles in any case.

According to Mange's itinerary, the explorers left Santa Magdalena de Buquibava, on the banks of Rio San Ignacio or Santa Magdalena, February 9, traveling northwestward down the valley of that river (for the most part) 12 leagues to San Miguel del Bosna; the original party having been enlarged at Santa Magdalena by the addition of Nicolas Castrijo and Antonio Mezquita, with two Indians for guides. On February 10 they traveled from Bosna 5 leagues southward (evidently in the valley of Rio San Ignacio, which is here 5 to 25 miles in width), to sleep at the watering place of Oacue, or San Bartolome. The

¹ Venegas, *A Natural and Civil History of California*, vol. I, p. 192.

² Venegas, *Noticia de la California*, vol. I; Madrid, 1757, p. 219.

³ The Works of Hubert Howe Bancroft, vol. xv (*History of the North Mexican States*, vol. I, 1531–1800), 1884, p. 252.

⁴ *Apostolicos Afanes de la Compañia de Jesus*, escritos por un Padre de la misma Sagrada Religion de su Provincia de Mexico; Barcelona, 1754, p. 246 et seq.

next day they journeyed westward along the wash (of San Ignacio), stopping, as was their custom, to baptize the sick and others, and after covering 10 leagues camped at a tanque. On February 12 they continued westward over mesquite-covered plains for 4 leagues, and then turned northwestward for 3 leagues along the San Ignacio to Caborca, where they spent the remainder of the day in evangelical work. Next morning, after saying mass, they again proceeded westward "por la vega del rio abajo" (down the bank of the river); at 2 leagues distance they arrived at the place at which the river "sinks", but continued westward along the sand-wash 5 leagues farther, passing the night at a tanque of turbid water. On February 14 they again celebrated mass, and then proceeded westward over the plains ("prosiguiendo nosotros al Poniente por llanos"); at 4 leagues they reached a rancheria which was dubbed San Valentin (still persisting as a Papago temporale; the "Bisanig" of various maps), watered from a well in the river bed; proceeding westward ("prosiguiendo al Poniente") 6 leagues farther, they ascended a sierra trending from south to north ("trasmontada una sierra que sita de Sur á Norte") of which they named the principal peak Nazareno, in a dry and sterile barranca in which they afterward slept; from this sierra they saw "the Gulf of California, and, on the farther coast, four mountains of that territory, which we named Los Cuatro Stos. Evangelistas, and toward the northwest an islet with three cerritos named Las Tres Marias, and in the southwest the Isla de Seris, to which they retreat when pursued by soldiers for their robberies, which we call San Agustin and others Tiburon."¹ The record continues:

On the fifteenth, after saying mass, we continued our route to the west by a dry and stony ravine which there is between the mountains, and at 3 leagues we met some Indians taking water from a small well in earthen jars, who, on seeing us, ran away, flying from fear; but at two musket shots we overtook them, treated them kindly, and brought them back to the well that they might assist in watering the horses, giving them all the water necessary, for the reason that they had not drunk the day before. For this reason we called this place Paraje de las Ollas. They were naked people, and only covered their private parts with small pieces of hare skin; and one of them was so aged that by his looks he must have been about 120 years old. We continued to the west over barren plains, arid and without pasture, a country as sandy as a sea-beach, until we reached the sand-banks, where the horses had great difficulty; and after another 7 leagues Father Kappus and the other people camped without water, and with only pasture of salt grass; but Padre Kino and I [Mange], with guides, and the governor of Los Dolores [Aguerra], in order to be forehanded, went west 2 leagues farther, crossing the bed of Rio San Ignacio; we arrived at the banks of an arm of the sea to which, in the sixty years that the province of Sonora had been peopled, no one had come, and we were the first who had the great privilege of seeing the Island of the Seris and that of Tres Marias, as well as the mountains of Cuatro Evangelistas, in California, on the other side of the gulf, the width of which, according to the measuring instruments at this position of 30° [actually about 30° 35'], is some 20 leagues. We returned to the bed of the river [San Ignacio], where we found a well nearly dry; we drew from it water for the horses, who had had nothing to drink, and took some ourselves, although it was turbid, muddy, and disagreeable.

¹ Translated somewhat freely from Resumen de Noticias, in Documentos para la Historia de Mexico, cuarta série, tomo I, 1856, pp. 235-236.

Now, this itinerary recounts, in definite and unmistakable terms, the incidents and localities of a journey down the valley of Rio San Ignacio (also called Santa Magdalena, Altar, Ascuncion, Pitiquito, Caborca, etc, in different parts of its course), from the present city of Santa Magdalena by the present town of Caborca to the coast at a point almost directly west of both Caborca and Santa Magdalena. Moreover, Kino's map of 1702¹ locates "Nazareno" on this river, and permits identification of the sierra with Dewey's "three conspicuous peaks" placed directly inland from the lagoon at the mouth of San Ignacio river, on the Hydrographic Office charts; it also locates Caborca (miswritten "Cabetka") in approximate position. Furthermore, it would have been physically impossible for the rather heavily outfitted Kino party, with carriages and churchly equipage, to traverse the untrodden and forbidding wastes from Caborca to even the nearest part of Seriland within the period of two days and a fraction, and the distance of 29 leagues (some 74 miles), detailed in the itinerary. The direct way from Caborca to Tiburon would lie due southward, over sierra-ribbed and barranca-cut plains never yet explored by white men, nor even traversed by Indians so far as known, for more than 100 miles in an air line; while the nearest practicable route, passing by way of Cieneguilla, Las Cruces, Pozo Noriega, Bacuachito, Sayula, Tonuco, Rancho Libertad, and Barranca Salina (or Aguaje Parilla) measures fully 200 miles, and requires at least six days for the passage with good horses and light equipage. The Kino party might, indeed, have turned southwestward at Caborca and pushed to the now abandoned landing at the anchorage below Cabo Lobos;² but the directions and distances specifically stated, and the specific identification of Rio San Ignacio at the end and at other points of the journey, all prove that this was not the route actually traveled. The terminus of the trip so clearly fixed by the itinerary is over 100 miles from the nearest point of Seriland proper; moreover, Tiburon is rendered invisible both from the coast and from Cerro Nazareno not only by distance, but by intervening sierras, notably those projecting into the Gulf to form Cabo Lobos and Punta Tepopa. It follows that Kino and Mange completely missed Seriland in their expedition to the coast, and there is nothing to indicate that they ever saw the Seri tribesmen. Their descriptions of the Indians encountered fairly fit the peaceful Papago of the interior and the timid Tepoka of the coast; and neither Mange's narrative nor other contemporary records suggest contact between the exploring party and the distinctive holders of Tiburon. The specific and repeated references in the itinerary to the island of San Agustin, or Tiburon, evidently relate to the ancient Isla de Santa

¹ Tabula Californiae, anno 1702 (Via terrestris in Californiam comperta et detecta per R. Patrem Eusebium Fran. Chino è S. I. Germanum. Adnotatis novis Missionibus ejusdem Societatis ab anno 1698 ad annum 1701), in Stocklein, Der Neue Welt-Bott, Augspurg und Grätz, 1726.

² Elaborately mapped and established (on paper) as the "Puerto y Villa de la Libertad" in 1861 (Boletin de la Sociedad Mexicana de Geografia y Estadística, 1863, x, p. 263 et seq.), and actually maintained from 1875 to 1884 as the port of Libertad (not the abandoned Rancho Libertad on the border of Seriland), or Serna, according to Dávila (Sonora Histórico y Descriptivo, pp. 140, 309).

Inez, the modern Isla Angel de la Guarda,¹ one of the most prominent geographic features visible either from Cerro Nazareno or from the adjacent coast. There is no reason to infer that Kino or any of his party ever detected their error in identification of geographic features which must have been conspicuous in the lore of the aborigines and settlers of Sonora; indeed, the error well attests the prominence of the Seri and their habitat in the local thought of the time.²

An effect of the Jesuit invasion was to give record to episodes growing out of alien contact with the Seri. One of the earliest of these records recounts nocturnal raids by the "Seris Salineros" for robbery and murder in the pueblos of Tuape, Cucurpe, and Magdalena (de Tepoca).³ In January, 1700, Sergeant Juan Bautista de Escalante set out with fifteen soldiers to this mission of Santa Magdalena de Tepoca on an expedition of protection and reprisal; and here he learned that the "Seris Salineros" had killed with arrows three persons. Taking their trail, he reached Nuestra Señora del Populo only to find that ten families of converts had deserted to steal cattle, whereupon he started in search of them; he overtook them 20 leagues away, and, despite armed resistance on their part, arrested and whipped them and returned them to the pueblo. Among the captives were two "Seris Salineros" concerned in the murders at Tepoca, and three others guilty of similar outrages at the Pueblo de los Angeles de Pimas Cocomacagües; these he executed as a warning to the others, after taking their depositions and confessions, and after they were shrived by Padre Adano Gilo (or Adan Gilg), the priest of Populo. This duty performed, he resumed the trail of the Seri, accompanied by the padre; and, approaching the sea, he found a port, as well as an island to which most of the Seri had escaped in balsas, leaving eight of their number, who were arrested and turned over to the priest.⁴

This is the first record of actual invasion of Seriland by Caucasians. According to Bancroft, it "may be deemed the beginning of the Seri wars which so long desolated the province".⁵

The next noteworthy episode occurred when Sergeant Escalante, who had returned to Tuape and Santa Magdalena (de Tepoca), again set out for the coast on February 28, 1700, taking a new route (probably down Rio Bacuache). He traveled 30 leagues, passing four watering places, and on March 6 arrived at the Paraje de Aguas Frias (probably

¹ Identified by Alexandre de Humboldt in his *Carte Générale du Royaume de la Nouvelle Espagne*, of 1804 (in *Atlas Géographique et Physique*, Paris, 1811). So late as 1840 the old name was sometimes retained, e. g., on Robert Greenhow's map accompanying his *History of California and Oregon*.

² In one of the last letters from his pen, dated November 25, 1899, the late Dr Elliott Coues wrote, "I find you trailing Kino and Mange in 1694 precisely as I had them, and I make no doubt of the substantial accuracy of your typewritten MS. I accept your position that the large island they sighted and named San Agustin was not Tiburon, but Angel de la Guarda Isl."

³ A mission founded in 1699 by Padre Melchor Bartiromo (*Historia de la Compañia de Jesus en Nueva España, que esta escribiendo el P. Francisco Javier Alegre*, 1842, tomo III, p. 117), of which the location has long been lost.

⁴ *Resumen de Noticias*, op. cit., tomo I, p. 321.

⁵ Op. cit., p. 275 (the year is misprinted 1800 on this page and in the index).

Pozo Escalante or Agua Amarilla of recent maps); there, three nights later, he was attacked by archers, who discharged arrows into the soldiers' camp and immediately fled. Subsequently, seeking their enemies close to the sea 20 leagues away (probably on the eastern shore of El Infiernillo), Escalante and his men were joined by 120 Tepoka people; and, failing to find their assailants, they gave these allies a supply of provisions and turned them over to Padre Melchor Bartiromo, who allotted to them, in conjunction with 300 deserters from the missions who had been captured by the soldiers, not only lands but corn for sowing and eating. Having thus disposed of the Indians, Escalante and his soldiers returned to the coast on March 28, 1700, to punish the boldness and pride of the Indians in their stronghold ("los indios seris de la ranchería del medio"). Passing by balsas to the island, "they overtook those who caught up bows and arrows to fight, of whom they slew nine as an example to the others"; and these others they captured and sent to the priest at Populo—after which the party returned to Cucurpe in time to celebrate Holy Thursday on April 8.¹

This contemporary recital, written by Escalante's acquaintance and rival in exploration and subjugation, Juan Mateo Mange, bears both internal and external evidence of falling well within the truth. It is corroborated and extended by Alegre's version, written forty or fifty years later on data at least partially independent: according to Alegre, Escalante and his soldiers went on balsas to the "Isla de los Seris, which is called San Agustin by some, but more commonly Tiburon". He added that the retreats of the Seri after the murders and robberies committed at the pueblos of Pimeria, as well as the abundant pearl fisheries, have made this place highly noted ("muy famosa"); and he correctly described the strait and the projecting sand-banks opposite the center of the island, which reduce the open water to a width of barely half a league: "At this constriction the Seri cross in balsas composed of many slender reeds, disposed in three bundles, thick in the middle and narrowing toward the ends, 5 and 6 varas in length. These balsas sustain the weight of four or five persons, and with light two-bladed paddles 2 varas in length cut the water easily." He remarked also that while a part of the Seri seen on the island by Escalante were captured the major portion escaped, "fleeing with great swiftness".²

The early record is also corroborated, in a manner hardly credible in regions of more rapid social and physiographic development, by local tradition and by the survival of the well excavated by the party and still bearing Escalante's name.

On the whole it may be considered established that Sergeant Escalante crossed El Infiernillo and visited Tiburon in 1700; and, although it may be possible that pearl fishers or others preceded him, he must be credited with the first recorded exploration of strait and island by white men.

¹ Resumen de Noticias, op. cit., tomo I, pp. 321-322.

² Op. cit., tomo III, pp. 117-119.

The specific references to the Seri and their insular habitat by Ribas, by Kino and his chronicler, and by the various recorders of Escalante's expeditions, establish the extent of the lore concerning people and place, even before the end of the seventeenth century. This lore found measurable expression in maps prepared in Europe, even by those cartographers who purposely or otherwise ignored the surveys of Ulloa and Alarcon. In his "newest and most accurate" map of America, 1662, Fredericus de Witt depicted the Gulf of California ("Mare Vermio olim Mare Rvbrvm") as extending northward to connect with the mythic Strait of Anian ("Fretum Aniani"), yet he located Rio Colorado ("R. de Tecon") and Rio Gila ("R. de Coral") approximately, placing the largest island in the gulf, named "I. Gigante", just off their (common) embouchure;¹ and an anonymous map of the Pacific ocean, apparently by the same author and of closely corresponding date, is essentially similar.² The map of the northern part of America by Péter van der Aa, about 1690, is also similar, though on smaller scale;³ and the same may be said of that cartographer's new map of America, issued about the same time, in which the island is designated "I. de Gigante".⁴ A somewhat later map by Van der Aa (although supposed to have been issued in 1690) is greatly improved; the "Mer de Californie" is brought to rather indefinite end a little above the mouth of Rio Colorado ("R. de bona guia"); the "Pimases" are placed in proper position with respect to the Gila ("R. de Coral"), and the "Herises" are located a third of the way and the "Ahomeses" half way down the gulf; while a greatly elongated island stretches from the one to the other off the province of "Sonora".⁵ The origin of the name "Gigante" is uncertain; it may be borrowed from a land feature. As used in some cases it apparently connotes the size of the island, while the use in other cases evidently connotes gigantic inhabitants.

Naturally, in view of the slow and imperfect diffusion of knowledge characteristic of early times, cartographers were dilatory in introducing the observations of Kino and Escalante. The map of America by Herman Moll, about 1708,⁶ represents the "Gulf of California or Red Sea", connecting the "South Sea" with the "Straits of Annian", and depicts Rio Colorado ("Tison R.") and a composite river apparently designed to represent Rio Gila (made up of "R. Sonaca", "R. Azul", and "R. Colorado", with two other long tributaries from the south) embouching separately a little below midlength of the gulf. Somewhat above these are three islands, one of which is designated "Gigate

¹ *Novissima et Accuratissima Septentrionalis ac Meridionalis Americæ*, Amsterdam. (In *American Maps*, 1579-1796, Library U. S. Geological Survey, 135.)

² *Mar del Zvr, Hispanis, Mare Pacificum*. (Ibid., 129.)

³ *T Noorder Deel van Amerika*, Leyden. (Ibid., 178.)

⁴ *Nouvelle Carte de l'Amerique*, Leyden. (Ibid., 156.)

⁵ *L'Amerique Septentrionale Suivant les Nouvelles Observations, etc.*, Leyden. (Ibid., 181.) This island is not named, but is undoubtedly the Santa Inez of several other maps—the Angel de la Guarda of the present.

⁶ *North America, according to ye Newest and most Exact Observations, etc.*, London. (Ibid., 93.)

Isle", while "Pimeria" is located correctly with respect to Rio Gila, though too close to the sea, and "R. Sonora" is located too far southward, with a province of the same name just north of it. There is no reference to the Seri, but a locality in Lower California opposite Sonora is named "Gigante".¹ Quite similar is the map of North America drawn and engraved by R. W. Seale about 1722, though the provinces of Pimeria and Sonora are brought closer together, while the magnified Gila is named Colorado ("Tison R." also being retained).² The map of North America presented to the Duc de Bourgogne by H. Iaillet about 1720 is much the same; the "Isle de Californie" is separated from the continent by "Mar Vermejo ou Mer Rouge" with four islands, of which the southernmost, "I. de Gigante", lies somewhat below the separate mouths of "R. de Tecon" and "R. de Coral", while the extravagantly magnified Gila of previous maps is partially replaced by a still more extravagant "R. del Norte", rising in a mythical lake above the fortieth parallel and falling into the gulf under the thirtieth.³ The map of Mexico and Florida by Guillaume "De l'Isle", published in Amsterdam by Covens and Mortier, 1722, patently begs the question as to the northern extension of "Mer de Californie" by cutting off the cartography at the critical point. "R. del Tison" is retained as a subordinate river, while the separate and greatly magnified Gila corresponds with that of the Iaillet map, the upper tributary being "R. Sonaca ou de Hila"; "R. di Sonora" is depicted in approximate position, with the province of the same name extending northward and "Seris" located a little above the mouth of the river. No islands are shown in the vicinity, but the name "Gigante" appears on the western coast of the gulf, about latitude 26°. ⁴ The map of North America by the same author, supposed to date about 1740 though probably earlier, recalls the Van der Aa map of 1690 (?); "Mer de Californie ou Mer Vermeille" ends doubtfully about latitude 34°, where "R. de bona guia" and "R. de Coral" bound the "Campagne de bona guia", and fall separately into the gulf near its head; the "Pimases", "Herises", "Sumases", "Aibinoses", and "Ahomeses" are distributed thence southward along the coast to about the twenty-eighth parallel, while a nameless island stretches parallel with the coast of "Sonora" from about 28° to 32°. ⁵

With one or two exceptions, these maps demonstrate the prevailing neglect or ignorance of the classic explorations along the western coast of America early in the sixteenth century; yet they introduce features representing vague knowledge of the Seri Indians and their insular habitat, undoubtedly derived (like that of Padre Kino and Sergeant Escalante anterior to their expeditions) from native sources.

¹ Doubtless the mountain "La Giganta", named by Admiral Otondo toward the end of the seventeenth century (*Documentas para la Historia de Mexico*, cuarta série, 1857, tomo v, p. 122), and noted by Hardy in 1826 (*Travels in Interior of Mexico in 1825, 1826, 1827, and 1828*, London, 1829, p. 243).

² A map of North America, with the European Settlements and whatever else is Remarkable in ye West Indies, from the latest and best Observations. (*American maps*, loc. cit., 110.)

³ *Amerique Septentrionale Divisée en Ses Principales Parties*. (*Ibid.*, 109.)

⁴ *Carte du Mexique et de la Floride, des Terres Angloises et des Isles Antilles, etc.* (*Ibid.*, 136.)

⁵ *L'Amerique Septentrionale . . . par G. de l'Isle*: Amsterdam, Chez Pierre Mortier. (*Ibid.*, 172.) The island is, of course, Santa Inez, i. e., Angel de la Guarda.

The Kino map of 1702 gradually came to be recognized as trustworthy in important particulars, and brought to an end the baseless extension northward of the gulf; yet it was seriously inaccurate in details, particularly those affected by the erroneous identification of the second-largest island in the gulf with the largest. Accordingly Isla Santa Inez (the modern Isla Angel de la Guarda) is omitted from its proper position, and replaced by "I. S. August" close to the eastern coast; yet the land-mass of Tiburon is roughly defined as a peninsula bounded on the north by "Portus S. Sabina" (Bahia Tepopa) and on the south by "Baya S. Ioa. Bapt." (Bahias Kunkaak and Kino). Two other considerable islands are represented as dividing the width of the bay west-southwest of "I. S. August", and are named "2. Saltz-Insel"; although evidently traditional, their positions correspond roughly with those of San Esteban and San Lorenzo. The map locates the "Topokis" between Rio San Ignacio and Rio Sonora, with the "Guaimas" immediately below the latter.¹ Kino's three pier-like islands bridging the gulf were adopted in Delisle's map of America, published in Amsterdam by Jean Covens and Corneille Mortier about 1722, in greatly reduced size, though larger islands are shown farther northward; and an ill-defined peninsula corresponding to Tiburon is retained.² The D'Anville map of 1746 embodies Kino's discoveries about the head of the gulf and retains his pier-like islands, yet not only corrects his error in omitting the second greatest island of the gulf, but perpetuates equal error in the opposite direction: "I. de S. Vicente" is made the largest of the islands and located near the western coast a little below the mouth of Rio San Ignacio, while "I. de Sta. Inés" is made second largest and is located southeast of it and near the eastern coast. The third island in size is named "Seris", while the fourth and fifth, completing the Kino trio, are called "Is. de Sal", and the mainland projection remains defined on the south by "B. de S. Juan".³ The Vaugondy map of 1750 locates the transverse trio of islands in greatly reduced size, and omits the larger islands of the gulf.⁴ The islands, etc., of the Covens and Mortier map of 1757 correspond closely with D'Anville's map of 1746, and a nameless bay defines a peninsula in the position of Tiburon.⁵ The Pownall map of 1783 also follows that of D'Anville so far as the islands are concerned, though the position of that corresponding to the present Angel de la Guarda lies beyond the limit of the sheet; "I. de Inez" lies some distance below the mouth of "Sta. Madalena" river, off the territory of the "Sobas" and "Seris"; "Seris I." is smaller, the two "Sall Is." are smaller still, and there is an ill-defined projection of the mainland, bounded on the south by "B. de S. Juan".⁶

While the makers of the later of these maps were engaged in perpet-

¹ Map in Stocklein, *op. cit.*

² Carte d'Amérique, etc. (American maps, *loc. cit.*, 20.)

³ Amérique Septentrionale . . . par le Sr. d'Anville, Paris. (Ibid., 50 and 51.)

⁴ Amérique Septentrionale . . . par le Sr. Robert de Vaugondy, Paris. (Ibid., 27.)

⁵ L'Amérique Septentrionale, etc., Amsterdam. (Ibid., 160.)

⁶ A new map of North America, with the West India Islands. . . Laid down according to the Latest Surveys, and Corrected from the Original Materials of Gover. Pownall, London. (Ibid., 22.)

uating the vestigial features, erroneous and otherwise, of the Kino map, the Jesuits of peninsular California employed themselves in reexploration of the western coast of the gulf, a particularly productive expedition being that of Padre Ferdinando Consag, in 1747. The padre's map represents the western coast in considerable though much distorted detail, and depicts "I. del Angel de la Guarda" as a greatly elongated body, a third of the way across the gulf from the western coast; next in size is "I. d S. Lorenzo"; then come "I. d S. esteban" in the middle of the gulf, and in the same transverse line, but quite near the eastern coast, "I. d S. Agustin", the two being approximately equal in size, while above and about equidistant from them is "I. de S. Pedro", about half so large as either. These, with four smaller islands near the western coast, bear the general designation "Islas de Sal, si puedes", which in this case may be translated "Salt (possibly) islands," though later forms of the name imply a quite different meaning, i. e., "Islands of Get-out-if-(you-) can", or "Get-out-if-canst".¹ The eastern coast shows two deep indentations named "Tepoca" and "Bahia d S. Juan Bautista" bounding a peninsula corresponding in position to insular Seriland.² It is evident that the cartography of the eastern coast is based on that of Kino, that the island of San Agustin is hypothetic, and that the land-mass of Tiburon proper is not separated from the mainland, while San Pedro island is apparently the Isla Patos of the present. The more general map by Venegas combines details of the Consag, Kino, and other maps; "I. del Angel de la Guarda" is greatly magnified and placed somewhat too far northward, while both San Lorenzo and San Esteban are made much larger than "I. San Agustin", which is represented as scarcely larger than "I. de S. Pedro"; the mainland is indented to

¹ It seems probable that various early cartographers were misled by the traditional lore of "salineros", or salt-making Indians, in combination with the unusual designation of these islands. In his text Padre Consag rendered the term "Sal-si-puedes", and strongly emphasized the violent tidal currents and consequent dangers to vessels which suggested the vigorously idiomatic designation to early navigators (Venegas, *Noticia de la California*, III, p. 145); in the Venegas map (*ibid.*, tomo I, p. 1) the name is used without the qualifying comma, and in the text it is hyphenated "Sal-si-puedes", the author observing concerning the local currents, "These currents run with astonishing rapidity, and their noise is equal to that of a large rapid river among rocks; nor do they run only in one direction, but set in many intersected gyrations" (*A Natural and Civil History of California*, p. 63). And the "Sacerdote Religioso", whose letters place him among the authorities on Lower California, wrote: "In the narrows of the gulf are a multitude of islets, for the passage being so dangerous to vessels they are called *Sal si puedes*" (*Noticias de la Provincia de Californias*, Valencia, 1794, p. 11); while Hardy, who navigated this portion of the gulf early in the present century (*Travels in the Interior of Mexico*, London, 1829, p. 279), mentioned a passage "between the islands called 'Sal si Puedes' (get back if you can)". So, too, Duflot de Mofras wrote of "les iles de Sal si puedes (Sors si tu peux)" in his *Explorations du Territoire de l'Orégon*, Paris, 1844, p. 219. Bancroft properly reduced the obscure connotive phrase to the single denotive term "Salsipuedes," and noted the signification as "Get out if thou canst" (*North Mexican States*, vol. I, p. 444). In 1873-1875 Dewey restricted the name to a single island and a channel, and emphasized the currents in the latter "against which sailing vessels found it almost impossible to make any headway" (*The West Coast of Mexico*, Publication 56, U. S. Hydrographic Office, Bureau of Navigation, 1880, p. 113), and rendered the name "Sal-si-puedes" in the text, "Sal si puedes" on the charts. Hittell's reference to "the group of islands then known as Salsipuedes, the largest of which is now called Tiburon" (*History of California*, vol. I, p. 225), doubtless expresses the early use of the term precisely, save that the present Tiburon was long treated as a part of the mainland, while its names were applied to Isla Tassne or some other islet. Vide postea, p. 45.

² Seno de California, etc., in Venegas, *Noticia de la California*, tomo III, p. 194.

great depth by Kino's "Pto. de Sta. Sabina" and "Bahia de Sn. Juan Baptista", in such wise as to define a decided peninsula, while the "Seris" are located 2° farther southward and below Rio Sonora, and the "Guaimas" still farther down the coast.¹ Another illustration of the chaotic notions of the time is afforded by the Baegert map, published in 1773, and credited largely to Consag.² The sheet locates the author's routes of arrival (1751) and departure (1768), the former overland from far down the coast to the mouth of "Torrens Hiaqui," and thence directly across "Mare Californiae", via "Tiburon" (lying just off the mouth of the river, in latitude 28°), with the usual congeries of islands, headed by "I. S. Ang. Gart" (Angel de la Guarda), in latitude 30°-31°, and the usual shore configuration above the debouchure of Rio Sonora; "Los Seris" are located in the interior between Rio Sonora and "Torrens Hiaqui", while just above the mouth of the latter lies "Guaymas M.[ission] destr. per Apostatas Seris". The Pownall map of 1786 incorporates Padre Consag's results on reduced scale, but omits the islands toward the eastern shore of the gulf.³

On the whole the cartography of a century indicates that the striking explorations of Ulloa, Alarcon, and Diaz were utterly neglected; it indicates, too, that Kino's observations were promptly adopted, but that his erroneous identification of the island seen from Nazareno occasioned confusion; yet there is nothing to indicate definite knowledge of Escalante's discoveries. Apparently the cartographic tangle began with the failure to discover the narrow strait traversing Seriland, coupled with hearsay notions of an insular Seri stronghold; it was complicated by Kino's erroneous identification of the hearsay island; and it grew into the mapping of a traditional islet about the position of Tiburon, and the extension of the mainland into a peninsula embracing the actual land-mass of that island⁴—the islet lying about the site of the modern Isla Tassne, and often appearing under the name San Agustin.⁵ Accordingly, so far as maps are concerned, Escalante's discoveries were no less completely lost than those of Ulloa.

The recorded history of the Seri Indians during the earlier two-thirds of the eighteenth century is largely one of zealous effort at conversion on the part of the Jesuit missionaries, who repeatedly approached the territory by both land and sea; yet the records touch also on events of exploration and on the characteristics of the tribe.

One of the earliest chroniclers was Padre Juan Maria de Sonora, who in 1699-1701 inspected many of the missions of Lower California and

¹ Noticia de la California, tomo I, p. 1.

² California, per P. Ferdinandum Consag, S. I., et alios, in Nachrichten von der amerikanischen Halbinsel Californien. . . . Geschrieben von einem Priester der Gesellschaft Jesu (identified as Jacob Baegert by Rau, Smithsonian Report, 1863, p. 352); Mannheim, 1773.

³ A New Map of the Whole Continent of America, London. (American maps, loc. cit., 4.)

⁴ This cartography reappeared occasionally up to about the middle of the nineteenth century, as illustrated by the Greenhow map accompanying the edition of his history issued in 1845.

⁵ This condition is revealed in Mühlenpfordt, Versuch einer getreuen Schilderung der Republic Mejico, etc.; Hannover, 1844.

Sonora and acquainted himself in exceptional degree with the neophytes and their wilder kindred. About the beginning of 1701 he crossed with great danger ("pasé con grande peligro") from Loreto to the eastern coast, and, accompanied by two "Indios Guaymas, caciques," proceeded among the Sonoran settlements.¹ On February 18 he was at the new town of Magdalena (de Tepoca), "where, with great labor, Padre Melchor Bartiromo had gathered more than a hundred souls of the maritime nation of Tepocas", and where the visitors were accorded an enthusiastic reception. He went on to say:

It is notable that where the Tepocas and Salineros are located the sea is populous with islands [muy poblado de islas], and the first of these toward the coast contains foot-folk [gente de á pié], who live on it. Then there are two islands much nearer the mainland of California, and it is said that they [the Tepoka] are able to navigate in their barquillas [balsas] to the adjacent coast; and the possession of these Tepocas, who are all Seris by nation, of certain words of the Cuchimies of [Lower] California, who occupy the opposite coast, indicates that they have communicated in other times.²

This record is especially significant as indicating the affinity between the Seri and the Tepoka, as establishing the transnavigation of the Gulf by the Seri craft, and as explaining the possible passage of loan words from the Cochimi to the Seri, and presumptively from the Seri to the Cochimi.

A notable visitor to the shores of Seriland was Padre Juan Maria Salvatierra, who had previously "made a peace betwixt the Seris cristians, and the Pimas", soon violated by the former "in the murder of 40 Pimas". In August, 1709, he essayed the recovery of a vessel wrecked "on the barren coast of the Seris", which these Indians were engaged in looting and breaking up for the nails; and, by dint of his "persuasive elocution . . . not a little forwarded by the respectable sweetness of his air", aided by timely explosions of the bark's pateraroes (mortars), he induced restitution, the restoration of peace, and the reinstatement of several of the robbing and murdering Seri as communicants.³ Padre Salvatierra observed the distinctive character of the Seri tongue, but made no extended exploration of Seriland, either coastwise or interior.

The next noteworthy visitor was Padre Juan de Ugarte, who, at the instance of Salvatierra, undertook an exploration of the gulf coast complementary to Kino's land explorations about its northern terminus. Ugarte was the Hercules of Baja California history; he awed the natives by slaying a California lion, unarmed save with stones, and enforced orderly attention to his catechizing by seizing an obstreperous champion by the hair, lifting him at arm's length, and shaking him into submission; and under incredible difficulties due to absence of material and distance of timber, he built the first vessel ever con-

¹ Documentos para la Historia de Mexico, cuarta série, tomo v; Mexico, 1857, pp. 125-126.

² Ibid., p. 132.

³ Venegas, A Natural and Civil History of California, vol. I, pp. 405-411.

structed in California, the bilander (two-master) *El Triunfo de la Cruz*—a fit prototype of the *Oregon* of nearly two centuries later—which proved to be the finest craft ever seen on the coast, and played an important rôle in later history.¹

On May 15, 1721, Ugarte embarked at Loreto (Lower California) and skirted the coast northward to the Islas de Salsipuedes, whence he crossed the gulf to “Puerto de Santa Sabina, ó Bahía de San Juan Bautista” near the islands “en la Costa de los Tepoquis, y Seris”.² The Indians soon appeared and, in excess of amity (ascribed to the display of the cross), threw themselves into the sea and swam to the ship, and afterward aided in taking water; for “early next day the Indians appeared in troops, and all with water-vessels; the men each with two in nets hanging from a pole across their shoulders, and the women with one.”³ After watering, the Ugarte party, accompanied by two of the Indians, set sail in the bilander with a pinnace and a canoe, and in the early morning found themselves in a narrow channel apparently separating the island from the mainland; the pinnace and the canoe were dispatched to courier the larger craft; but “the channel, besides being narrow and crooked, was so full of shoals that . . . the bilander stuck and was in danger of being lost”, while the canoe and the pinnace were caught by the currents and carried “to such a distance as not to be seen”. Finding it impossible to return, the party pushed on, and “after three days of continual danger, they reached the mouth of the channel, where they found the boat and pinnace”; when they were surprised to find the strait opening, not into the gulf, but into a great and spacious bay. Approaching a landing, they were met by Indian archers wearing feather headdresses and comporting themselves in a threatening manner; but these were pacified by the two Indians brought from the watering-place. Here Ugarte was taken ill, and the islanders made thirteen “balsillas” on which fifty Indians passed to the bilander and urged him to land on the island, where they had prepared a house for his reception; this he did, despite severe suffering, and was received with great ceremony. After a short stay, the party explored the coast northward, stopping off Caborca to lay in supplies, and discovered (anew and independently) the mouth of the Colorado; then, despite repeated risk and much suffering from the exceeding tides, severe storms, and the terrible tiderips off Islas Salsipuedes, they finally made return to Loreto.

The itinerary of this voyage recounts the first recorded navigation through El Infiernillo; and, while it is too meager to permit retracing the trip in detail, it seems practically certain that the vessels entered Bahía Tepopa, watered at Pozo Hardy, passed around Punta Perla and thence southward through the strait, and emerged through Boca Infierno into Bahía Kunkaak, afterward proceeding westward and

¹ Hittell, *op. cit.*, vol. I, pp. 191-193, 219-221.

² Venegas, *Noticia de la California*, tomo II, p. 343.

³ Venegas, *A Natural and Civil History of California*, vol. II, p. 48.

northward around the outer coast, and thus circumnavigating Tiburon. While Ugarte's pilot, Guilermo Estrafort (or Strafort),¹ displayed great energy and courage in charting the coast, the voyage neither yielded published maps nor affected current and subsequent cartography; for, although Ugarte's narrative and Estrafort's map and journal were sent to Mexico to be presented to the viceroy, they were apparently lost.² Nor does the itinerary indicate recognition of Kino's error in identification of the Seri island, though several days were occupied in voyaging from the island to the latitude of Caborca; indeed, it seems probable that it was either Salvatierra, Kino's intimate associate, or Ugarte, Kino's colleague and Salvatierra's intimate friend, who fixed the name of the pioneer padre on the geographic features still known as Bahia Kino and Punta Kino—features which Kino never knew, as already shown.

Although both Salvatierra and Ugarte were on superficially amicable terms with the Seri, the amity was evidently of the shallowest and most evanescent sort. Venegas says:

Of the *Seris* and *Tepocas*, although the padre passed among them with the pay in his hand, he could not induce them to assist him in any way, even when they saw the party in the greatest distress; while others toiled, they reclined with the greatest serenity, nor have they shown the priests the slightest civility during the forty years of their acquaintance—they utterly refused to part with ollas of coarse ware, even for a liberal exchange.³

And the contemporary lore, crystallized in current administrative policy and later records, and corroborated by deep-rooted customs maintained for centuries and still persisting, is significant; it indicates that then, as now, it was the habit of the Tiburon islanders to flee from or fawn upon powerful visitors, to ambush or assail by night parties of moderate strength, to openly attack none but the weak or defenseless, yet ever to delight in tricking the credulity and consuming the stores and stock of aliens, and to revel in shedding alien blood when occasion offered. The adventurous hunters and gold seekers of the mainland, and the still harder pearl fishers of the coast, wrote nothing; but both civil and ecclesiastical records imply common knowledge that weaker parties venturing into the purlieus of Seriland never returned—they disappeared and left no sign.

While Salvatierra and Ugarte were occupied on the coast, the missionaries were no less industrious in the interior. The mission of Santa Magdalena de Tepoca was apparently soon abandoned; but the so-called Seri missions at Populo (Nuestra Señora del Populo) and Angeles (Nuestra Señora de los Angeles) were maintained from the time of Kino's coming up to the expulsion of the Jesuits (in 1767), while that at Nacameri was nearly as well sustained. The relations

¹ An Englishman named (probably) William Strafford, according to Bancroft; *op. cit.*, vol. I, p. 444.

² Venegas, *Noticia de la California*, tomo II, p. 370.

³ *Ibid.*, p. 366.

of these missions to Seriland are significant: according to the anonymous author of Sonora's classic, "*Rudo Ensayo*", written in 1763, Nacameri lay in the valley of Rio Opodepe (or Horcasitas), 7 leagues below the town of the same name (still extant); 9 leagues down the same stream lay Populo (on the site of the present town of Horcasitas); Angeles lay 3 or 4 leagues farther downstream, or over 12 leagues above the site of Pitic¹ (the present Hermosillo); while various references indicate that the temporary mission of Santa Magdalena was located in the same valley, probably a few leagues above Opodepe.² Accordingly, the missions ranged from 100 to 150 miles inland, measured in an air line, or four hard days' journey, as shown by Escalante's record, from the Seri coast. The nearest mission at Angeles was 75 miles, or three days' journey, from the inland margin of Seriland proper, and the intervening territory was a depopulated expanse ("el grande despoblado") according to Villa-Señor,³ ranged but not inhabited by Seri and Tepoka hunting parties. Never traversed by white men, save those of Coronado's parties nearly two centuries before and of Escalante's hurried expeditions of 1700, this "despoblado" was practically unknown; even the surprisingly well-informed author of "*Rudo Ensayo*" was unaware of the existence of Rio Bacuache, and noted only such prominent mountains as Cerro Prieto and "Bacoatzi the Great in the land of the Seris",⁴ lying far outside the tribal home. The remoteness of the missions from the habitat of the tribe bears testimony to the dread with which they were regarded, and to the slightness of the influence exerted on the tribesmen by the zealous padres.

Despite the efforts of both priesthood and soldiery, the number of Seri converts at the missions was limited. In 1700 there were ten families at Populo; true, they had slipped away to maverick the herds ("por ladrones de ganados"), but Escalante overtook them and whipped them back to the shadow of the church; later he captured 120 Tepoka people (probably some twenty families, with a few strays), and recaptured 300 backsliders (perhaps fifty families or more), and haled them all to the mission, where lands were allotted to them and where they were carefully guarded by the ecclesiastics—until opportunity came for reescape; and to this congregation Escalante added a few Seri prisoners taken on Tiburon, as noted above. In 1727 Brigadier Pedro de Rivera noted a dozen tribes in central Sonora, including the "Seris" and "Tepocas", numbering 21,746 "of all ages and both sexes", all receiving

¹ *Rudo Ensayo*, Guiteras' translation in Records of the American Catholic Historical Society of Philadelphia, vol. v, 1894, p. 124. Bandelier identified the author as Padre Nentwig, S. J., of Huassavas, eastern Sonora (Final Report of Investigations among the Indians, etc., part 1, in Papers of the Archaeological Institute of America, vol. III, 1890, p. 78). The name is written "John Nentuig" in a third-person reference in Guiteras' translation; but an editorial footnote adds, "No doubt a printer's mistake for Mentuig—L. F. F [lick]" (ibid., p. 191).

² *Noticias Estadísticas del Estado de Sonora*, by José Francisco Velasco, Mexico, 1850, p. 124.

³ *Theatro Americano, Descripcion General de los Reynos, y Provincias de la Nueva-España, y sus Jurisdicciones*, Joseph Antonio de Villa-Señor, y Sanchez, segunda parte; Mexico, 1748, p. 392.

⁴ *Op. cit.*, p. 133.

the ministrations of "los Padres de la Compañia de Jesus". He added: "Besides the above-named Indians there are found in the middle part of the province of Ostimuri, in the western part bordering on the Gulf of California, certain nations of pagans in small numbers; they are the Salineros, Cocomagues, and Guaymas."¹ Neither the numbers of Seri and Tepoka at the missions, nor the respective proportions at the missions and on the native habitat, were recorded by the brigadier. According to Alegre, eighty families (including those transferred from Pitic) were gathered at Populo and Angeles, under the specially sedulous efforts of Judge José Rafael Gallardo, in 1749;² although Padre Nicolas de Perera, "who for the longest time bore with their insolent behavior, . . . did not see more than 300 hundred persons when they had all come together".³ It would appear that the great majority of the Populo and Angeles converts belonged to the Tepoka, while others belonged to the Guayma and Upanguayma, with whom the Seri were at war about that time;⁴ yet there were enough representatives of the Seri to gain a shocking character for sloth, filth, thievery, treachery, obstinacy, and drunkenness. Assuming that a quarter of the converts were Seri (and this ratio is larger than any of the known records would indicate), there could hardly have been more than a hundred of the tribe gathered about the several missions at this palmiest time of Jesuit missionizing; and the records show that by far the greater portion of these were women, children, cripples, and vieilards, the warriors being commonly slain in the vigorous proselyting expeditions conducted by the civil and military coadjutors of the padres. If at this time the Seri population reached the 2,000 estimated by Dávila⁵ and others, the proportion of proselytes (or apostates from Seri naturalism) was but 5 per cent of the tribe and naturally comprised the less vigorous and characteristic element. The writer of "Rudo Ensayo" reckons that during six years preceding 1763 the Seri stole from the settlers (for eating, the sole use to which they put such stock) "more than 4,000 mules, mares, and horses",⁶ i. e., enough to sustain two or three hundred people, or a full thousand if this meat formed no more than a fourth or a fifth of their diet, as the contemporary records imply—and this was after the "extermination" of the Seri by Parilla in 1750.

Evidently the good padres greatly overestimated their knowledge of and influence on this savage yet subtle tribe; actually they touched the Seri character only lightly and temporarily, contributing slightly

¹ Diario y Derrotero de lo Caminado, Visto, y Observado en el Discurso de la Visita general de Precidios, situados en las Provincias Ynternas de Nueva España; Guathemala, 1836, leg. 1514-1519.

² Historia de la Compañia de Jesus, vol. III, p. 290.

³ Rudo Ensayo, p. 193.

⁴ Bancroft, op. cit., vol. I, pp. 532-533. The former were annihilated or driven into the Yaqui country by 1763 (Rudo Ensayo, p. 166).

⁵ Sonora Histórico y Descriptivo, p. 319.

⁶ Ibid., p. 140.

to spontaneous acculturation, but never coming into relation with the tribe as a whole.

And despite the efforts of both soldiers and priests, the savages continued to ravage the settlements, to repel pioneering, to decimate the herds and murder the vaqueros who sought to protect them, to plunder everything portable and ambuscade punitive parties, and even to engage in open hostilities. "In 1730 the Seris, Tepocas, Salineros, and Tiburon islanders kept the province in great excitement, killing twenty-seven persons and threatening all the pueblos with a general conflagration";¹ and both before and after this date the recorded sanguinary episodes were too frequent for even passing mention, while the indications between lines point to robberies and assassinations and minor conflicts too many for full record even by the patient chroniclers of the time.

Sometime about the beginning of the eighteenth century the Spanish settlements pushed down Rio Sonora beyond the confluence of the Opodepe to the last water gap, made conspicuous by a marble butte in its throat and by the fact that here the sometimes subterranean flow always rose to the surface in a permanent stream of pure and cool water. Here, according to Padre Dominguez, "it was attempted to locate the Presidio of Cinaloa against the rapacity of the Zeris, Tepocas, and Pimas; and here General Idobro, of Cinaloa, wished to found a pueblo of Tiburon Indians, brought for the purpose [probably from Populo and Angeles] that they might be kept in subjection, but most of them returned to their island and attempted to make attacks from their hiding places."² Nevertheless, the padre found 29 married persons, 14 single, and 99 children of these "races" at the rancho. At the time of his visit the place was known as Rancho del Pitquin; later it became the Pueblo of Pitic, or Pitiqui, or Pitiquin, or San Pedro de Pitic,³ and long afterward the city of Hermosillo, while the beautiful marble butte was christened Cerro de la Campana.

By 1742 the settlements were so far extended as to warrant the establishment of a royal fort in the water-gap at Pitic;⁴ and the ecclesiastics kept pace with the military movement by founding the mission of San Pedro de la Conquista,⁵ or "Pueblo de San Pedro de la Conquista de Seris"⁶ (now abbreviated to "Pueblo Seris", or merely "Seris"); both fort and mission being designed primarily for better

¹ Bancroft, *op. cit.*, p. 517.

² *Diario del Padre Dominguez en Sonora y Sinaloa, 1731*; manuscript in archives of the Bureau of American Ethnology.

³ This place on Rio Sonora is not to be confounded with the Rancho (afterward Pueblo) of Pitiqui or San Diego de Pitiqui (*The Geographical and Historical Dictionary of America and the West Indies* * * * of Colonel Don Antonio de Alcedo, by G. A. Thompson, London, 1814, vol. IV, p. 153), or Pitic chiquito (*Bol. Soc. Mex. Geog. y Est.*, vol. VIII, 1860, p. 454), or Pitiquin, now the town of Pitiquito on Rio San Ignacio.

⁴ Alegre, *Historia de la Compañia de Jesus*, tomo III, p. 288; Villa-Señor, *Theatro Americano*, segunda parte, p. 392; Rudo Ensayo, p. 193.

⁵ Bancroft, *op. cit.*, vol. I, p. 528.

⁶ *Reise-Erinnerungen und Abenteuer aus der neuen Welt*, von C. A. Pajeken, Bremen, 1861, p. 97.

protection of the settlements against Seri sorties. These outposts brought the missionaries and their soldier supporters a day's journey nearer Seriland, i. e., to within some 27 leagues (71 miles), or two days' journey, from Bahia Kino and the desert boundary of the Seri stronghold; and although neither fort nor mission was continuously maintained, the event marked a practically permanent advance on the "despoblado" previously despoiled and desolated by the wandering Seri.

Even before this date friction between missionaries and laymen had grown out of the ecclesiastical charity for a people whose repeated atrocities placed them outside the pale of sympathy on the part of the industrial settlers; and this friction was felt especially about the new presidio. In 1749 Colonel Diego Ortiz Parilla became governor of Sonora, and began a rigorous rule over civilians, soldiers, ecclesiastics, and Indians; and when the 80 families (classed as Seri, but mainly of Tepoka and other tribes) domiciled at Populo were dissatisfied with his transfers of land and people, he promptly met their protests by arresting them and transporting the greater part of them, including all the women and children, to various places, "some even in Guatemala and other very distant parts of America."¹ Naturally this was resented, not only by the Seri messmates at the missions, but to some extent by their kinsmen over the plains and along the coast, with whom sporadic communication was maintained—chiefly through spies, but partly by occasional escapes of the practically imprisoned proselytes and the less frequent but more numerous captures of new converts; and the Seri raids became more extended and vindictive, reaching northward to Caborca, northeastward to Santa Ana and Cucurpe, and eastward into the fertile valley of Rio Opodepe at several points. Deeply incensed in his turn, Parilla undertook a war of extermination—a war interesting not merely as an episode in Seri history, but still more as a type of the Seri wars of two centuries. Organizing a force of 500 men, and bringing canoes from Rio Yaqui, he planned an expedition to Tiburon, to cover two months—and returned with 28 prisoners, "all women and children and not a single Seri man"; though he reported killing 10 or 12 warriors in action (according to other accounts the slain comprised only 3 or 4 oldsters). These women and children were domiciled at the pueblo of the Conquest of the Seri, which in current thought thenceforth became the pueblo of the Seri, and gradually passed into lore and later into history as the home of the tribe rather than the mere penitentiary which it was in fact. The padres waxed satirical over this quixotic conquest: Alegre recounts that—

The good governor returned so vainglorious over his expedition that it was even said he would punish anyone intimating that there was a *Seri left in the world*, and proclaimed through all America and Europe that he had extirpated by the roots that infamous race. . . . The truth is that the force, on reaching Tiburon, ascertained that the enemy had retreated to the mountains; that none of the 75 Spaniards who accompanied the governor could be induced, either by entreaties or

¹ Rudo Ensayo, p. 194; Bancroft, op. cit., vol. 1, p. 535.

threats, to ascend in search of the Seri; but that some of the Pima allies undertook to beleaguer the mountains, these, with one or another of the officers, being the only ones that saw the face of the enemy, and even these on two occasions only. From the first sally they returned reporting that they had killed 3 of the Seri, and their empty word was accepted; the second time they were so fortunate as to discover a village of women and children, whom they took prisoners, and returned declaring that the men had been left dead on the field. This famous conquest, which the manuscript drawn up by the commander of the expedition did not hesitate to compare with those of Alexander and Cæsar, who were as nothing beside the governor of Sonora, intoxicated much more the allied chief of the Pima, who had taken the leading part in the final victory.¹

Eventually the vanity of this chief (Luis, or "Luys de Saric") led to a revolt on the part of the Pima tribe with the massacre of Padres Tello and Rohen at Caborca.

Ortega was still more sarcastic in his fuller record of the expedition. * The skepticism of the padres as to the completeness of Parilla's extermination was well grounded, as was attested by the continuation of Seri sorties with undiminished frequency and by the persistence of hippophagy at the expense of the stockmen as already noted; moreover, in the absence of records of maritime operations, in view of the impracticability of transporting so large a force as that of Parilla on balsas, and in the light of a still common application of the name Tiburon to Sierra Seri and its environs as well as to the island, it would seem to be an open question whether the much-lauded expedition ever attained the insular stronghold, or even reached the seashore. However this may be, the expedition was the first of a long series sent out to exterminate one of the hardest and acutest of tribes, wonted to one of the hardest and aridest of habitats; and, save in the subsequent advertising, all have yielded results more or less similar.

Another curtailment of the range of the Seri dates from the refounding of the mission of "San José de Guaimas"² (on the site of the present Guaymas) in 1751, and the establishment of a "rancho called Opan Guaimas" some distance up the coast about the same time; the site of the mission being that of a sanctuary located by Kino in 1701, and revisited by Salvatierra and Ugarte, though never continuously maintained. True, the padre and the ranchero suffered from the Seri, who displaced the former, killed eight of his converts, burned the church, and scattered the hundred families of the pueblo, afterward keeping the Spaniards at a distance for ten years;³ yet the settlers only returned with new vigor, and gradually gained the strength requisite for holding the town. Naturally the belligerency of the Seri in this vicinity impressed the state authorities with the desirability of further "extermination"; and when in 1756 a band of the Seri, after a hypocritical suit for peace, entrenched themselves among the all but inaccessible

¹ Historia de la Compañía de Jesus, tomo III, pp. 290-291; cf. Apostolicos Afanes de la Compañía de Jesus, escritos por un Padre de la misma Sagrada Religion de su Provincia de Mexico; Barcelona, 1754, pp. 366-368.

² Rudo Ensayo, p. 229 (misspelled "Guiamas").

³ Bancroft, op. cit., vol. I, p. 554.

rocks and barrancas of Cerro Prieto (a rugged sierra midway between Pitic and San José de Guaimas, which for this reason came to be regarded—erroneously—as the headquarters of the tribe), Don Juan Antonio de Mendoza, then governor of Sonora, sent out a strong body of soldiery to dislodge or destroy them; but after 200 of the soldiers were ambushed and 24 of them wounded, the expedition returned to the capital, San Miguel de Horcasitas. Stung by this defeat, Mendoza reorganized his force and led the way in person to Cerro Prieto, where one of the four parties into which the force was divided wrought such execution that, in the following May, there were seen the bodies of enemies “dead and eaten by animals, dead and partly buried in the earth, dead lying in caves, and dead in the water-pockets of the sierra”.¹ In this battle Mendoza himself was ambushed and attacked by three Seri archers, escaping only by the mediation of his saint (“por medio de mi santo”); but during the ensuing night he carried out the ingenious ruse of beating drums in different parts of the canyon, which reechoed from the rocky heights with such terrifying effect that the enemy fled, leaving him in victorious possession of the field.

Again in 1760, when a band of the Seri (supposed to be temporarily combined with the Pima) took refuge in Cerro Prieto, Governor Mendoza attacked them with over 100 men; but a band of 19 Seri successfully held this force at bay for several hours, until their chief (called El Becerro) fell wounded and dying, yet retaining sufficient vitality to rise, as the Spaniards approached, and transfix Mendoza with an arrow—when the two leaders died together.² Mendoza was succeeded by Governor José Tienda de Cuervo, who, in 1761, led a force of 420 men to Cerro Prieto, where a still bloodier battle was fought, the Seri losing 49 killed and 63 captured, besides 322 horses; though the greater part of their force escaped to the island of San Juan Bautista (San Esteban?).³

In 1763 Don Juan de Pineda succeeded to the governorship, and obtained the cooperation of a force of national troops under Colonel Domingo Elizondo:

Headquartering in El Pitiqui, he commenced active war against the said Seris, but was unable to reduce them, because, being separated and dispersed over their vast territory, they wore out the troops, who only occasionally stumbled on one little rancheria or another. For this reason, and because in many years they could not exterminate them, and desiring to leave the country, they opened negotiations with them, making them small presents and offering them royal protection if they would surrender peacefully. Some of them pretended to do this and assembled at Pitiqui, where they remained with the same bad faith as always, fed at the expense of the royal treasury, when the troops retired, leaving the evil uncured, but merely covered.⁴

In the same year Padre Tomás Ignacio Lizazoin reported, for the

¹ Documentos para la Historia de Mexico, cuarta série, tomo I, p. 85.

² Historia de la Compañia de Jesus, tomo III, p. 298.

³ Ibid., p. 299; Rudo Ensayo, p. 196. It is probable that part or all of the captives were quartered at Pueblo Seri, though the record is silent on this point.

⁴ Resumen de Noticias, op. cit., vol. I, p. 224.

information of the viceroy, that the ravages of the Seri and other Indians "had caused the almost total abandonment of Pimeria and Sonora provinces", and proposed plans for protection which were apparently never carried out.¹

The aggressive and bloody policy of Parilla, Mendoza, and Cueryo undoubtedly widened the divergence between the civil and ecclesiastical authorities, and brought to nought the pacific policy of the latter. Inspired by fervid zeal, the good padres stretched the mantle of charity to its utmost over their converts, bringing into the fold all whom they could coax or coerce, and clinging unto all whom they could subsidize or suppress. Uninformed or misinformed concerning the extent of Seriland and the numbers and real traits of its inhabitants on their native heath, and professionally prone to see the most favorable side of the situation, they imagined themselves making conquest over a cruel and refractory tribe; yet careful review of the records indicates that they deluded themselves, and in some measure distorted history, through overweening notions concerning their progress in evangelizing the Seri. Actually, their converts were the lame and halt and blind left behind in the harder-pressed raids, captives taken in battle by the intrepid Escalante and other soldiers, apostates and outlaws ostracized and driven off by their fellows, spies sent out to find the way for further rapacity,² and the general ruffraff and offscouring of the tribe, who esteemed parasitism above the hereditary independence of their kin. This condition is attested by later examples; it is also attested by the rapidly growing divergence of the ecclesiastical and civil policies; it is equally attested by at least partial recognition of the situation on the part of several of the padres: Villa-Señor, writing about 1745, parades the mission and two pueblos of the tribe, and says, "All the Ceris Indians are Christians" ("Todos los Indios Ceris, son Cristianos");³ yet he adds that "it is rare to find one who does not cling to the idolatry of their paganism", and elsewhere describes the great "despoblado" extending to the coast as inhabited by pagan Seri and Tepoka Indians ("habitado de los Indios Seris, y Tepoca, Gentiles").⁴ Venegas, writing about 1750, refers to "the Seris and Tepocas, who are either infidels or imperfectly reduced, and tho' Father Salva Tierra civilized them and the missionaries have baptized many, they still retain such a love for their liberty and customs as all the labours of the missionaries have not been able to obliterate, so that it is impossible to incorporate them with the missions by mildness";⁵ and his last word of them notes their massacre of Padres Tello and Rohen in Caborca, and ends

¹ Bancroft, *op. cit.*, p. 565.

² Captain Fernando Sanchez Salvador, in his official Representaciones to the Crown in 1751, complains that these Indians "are allowed on frivolous pretexts to visit the presidios, and they make use of the privilege to discover weak points and to plan attacks" (Bancroft, *op. cit.*, p. 542).

³ *Theatro Americano*, segunda parte, p. 401.

⁴ *Ibid.*, p. 392.

⁵ *History of California*, vol. II, p. 190.

with an invocation "for the complete reduction of these unhappy savages, now involved in the shadow of death".¹ So, also, the talented author of "Rudo Ensayo", writing in 1763, says of the Seri:

They have always been wild, resisting the law of God, even those who had removed from among them to Populo, Nacamari, and Angeles, and who constituted the smallest part of the nation. And even these few, in order to have constant communication with and give information to their heathen relatives, used to go, as if they could not arouse suspicion, to spy out in other villages what they wanted to know for their plans, and immediately giving the intelligence they obtained to the runaway Indians, these would act accordingly and nobody could guess how they acquired the necessary information.²

Again, in summarizing the relations with the tribe, this anonymous author naively remarked:

And at the present day, notwithstanding that in different encounters during the campaign of November, 1761, and before and since then, more than forty men have been killed by our arms and over seventy women and children have been captured, still they are as fierce as ever and will not lend an ear to any word of reconciliation.³

In general, the Jesuit history of the Seri is clear enough with respect to the small extruded fraction, but nearly blind to the normal tribe; there is nothing to indicate clear recognition of Seriland as a hereditary habitat and stronghold; yet the records are such as to define the salient episodes in Seri history as seen from a distantly external view-point. Nor can it be forgotten that the erudite evangelists made a deep and indelible impression on the intellectual side of Sonora, and drew the strong historical outline on which their own relations to the civil authorities on the one hand and to the Seri Indians on the other hand are cast by the light of later knowledge.

The discordance between the civil and military authorities and the dominant ecclesiastical order of Sonora sounded to Ciudad Mexico, and eventually echoed to Madrid, and was doubtless one of a series of factors which led to the needlessly harsh expulsion of the scholarly Jesuits in 1767—and hence to a hiatus in the history of the province and its tribes.

Although the padres knew little of the habits and customs of the "wild" Seri save through hearsay, some of their notes are of ethnologic value: Villa-Señor located them on the deserts extending from Pitic and Angeles to Tepopa bay, and added:

They hold and occupy various rancherias, and subsist by the chase of deer, bura [mule-deer], rabbits, hares, and other animals, and also on the cattle they are able to steal from the Spaniards, and on fish which they harpoon with darts in the sea, and on the roots in which the land abounds.⁴

Villa-Señor distinguished the "Tepocas", whom he combined with the

¹ Ibid., p. 211. It is improbable that the Seri had anything to do with this particular butchery. According to Cones, the latter padre was killed at Sonoita; and he renders the name "Ruen or Ruhen" (On the Trail of a Spanish Pioneer; the Diary and Itinerary of Francisco Garcés, etc., 1900, vol. I, p. 88)

² Op. cit., p. 193.

³ Op. cit., pp. 195-196.

⁴ Teatro Americano, p. 401.

“Gueimas” and “Jupangueimas”. Alegre located the Seri on the coast of the gulf from a few leagues north of the mouth of Rio Yaqui to Bahia San Juan de Bautista (Bahia Kino), adding, “with them may be classed the Guaimas, few in number and of the same language”.¹ Writing about the same time, José Gallardo observed: “The distinction is slight between the Seri and Upanguaima, the one and the other having the same idiom” (“Poco es la distincion que hay entre seri y upanguaima, . . . y unos y otros casi hablan un mismo idioma”).² The author of “Rudo Ensayo” wrote: “The Guaimas speak the same language, with but little difference, as the Seris.”³ He mistook Cerro Prieto as their principal retreat; mentioned the mountains of Bacoatzi Grande, Las Espuelas, and others as other haunts; noted Tiburon and San Juan Bautista (San Esteban ?) islands as less-known shelters, and gave extended attention to “the poison they use for their arrows” as “the most virulent known in these parts”; for “even in cases where the skin only is wounded, the injured part begins to swell, and the swelling extends all over the body to such a size that the flesh bursts and falls to pieces, causing death in twenty-four hours.” To test this poison, the Seri “bandage tightly the thigh or arm of one of their robust young men; then make an incision with a flint and let the blood flow away from the wound. When the blood is some distance from the incision, they apply the point of an arrow to it, steeped in the deadly poison. If at the approach of the point of the arrow the blood begins to boil and recedes, the poison is of the right strength, and the man who lends his blood for the experiment brushes it out with his hand to prevent the poison from being introduced into his veins.” He was unable “to find out with certainty of what deadly materials the deadly poison is composed. Many a thing is spoken of, such as heads of irritated vipers cut at the very moment of biting into a piece of lung; also half putrefied human flesh and other filth with which I am unwilling to provoke the nausea of the reader.” He added the opinion that “the main ingredient is some root.”⁴ Padre Joseph Och, who, with other German evangelists including padres Mittendorf, Pfefferkorn, and Ruen (or Rohen), was stationed in northwestern Sonora shortly before the eviction of the Jesuits, was one of the recorders of aboriginal traits and features, though his record (like that of most of his confrères) is impoverished by his failure to discriminate tribes; but one of his notes is specific:

As an extraordinary trapping [Zierde] the Seris pierce the nasal septum and hang small colored stones, which swing in front of the mouth, thereto by strings. A few carry, suspended from the nose, little blue-green pebbles, in which they repose great faith. They prize these very highly, and one must give them at least a horse or a cow in exchange for one.⁵

¹ Historia de la Compañia de Jesus, p. 216.

² The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III), 1882, p. 704.

³ Op. cit., p. 166.

⁴ Ibid., pp. 197, 198.

⁵ Nachrichten von verschiedenen Ländern des Spanisches Amerika, aus eigenhändigen Aufsätzen einiger Missionare der Gesellschaft Jesu, herausgegeben von Christoph Gottlieb von Murr, erster Theil; Halle, 1809, p. 255.

It is significant fact, and one attesting the physical and intellectual distance of the padres from the normal Seri, that so few notes of ethnologic value were made during the Jesuits' régime. With a single exception, so far as is known,¹ they recorded not a word of the Seri tongue, not a distinctive custom beyond those evidently of common knowledge, none of the primitive ceremonies and ideas such as attracted their coadjutors in Canada and elsewhere. They made no reference to the alleged cannibalism so conspicuous in later lore; but their silence on this point cannot be regarded as evidential, since they were equally silent concerning nearly all the characteristic customs and traits. The neighboring Papago tribe met the invaders frankly as man to man, displaying a notable combination of receptivity and self-containment which enabled them to assimilate just so much of the Caucasian culture as they deemed desirable, yet to maintain their purity of blood and distinctiveness of culture for centuries; the Seri, on the other hand, met the invaders as enemies, to be first feared, then blinded, balked, and bled by surreptitious and sinister devices, and finally to be assassinated through ambushade or remorseless treachery; and it is manifest that they surpassed the gentle padres in shrewdness and strategy, using them as playthings and tools, and carefully concealing their own characters and motives the while.

With the passing of the Jesuits, the publication of Sonoran records received a check from which the province has never completely recovered. True, the place of the order was partly taken by the Colegio Apostólico de Querétaro, which promptly dispatched fourteen Franciscan friars to Sonora, early in 1768, to take possession of the old missions and to found others;² it is also true that civil enactments and commissions, as well as military orders and reports, increased with the growth of population; but comparatively few of the events and actions found their way to the press. Seri episodes continued to recur with irregular frequency; according to Dávila, the Seri outbreaks and wars "exceed fifty in number since the conquest of Sonora",³ and there are decisive indications that the Franciscan régime was not without its due quota of strife. Moreover, the period was one of somewhat exceptionally vigorous pioneering, of the initiation of mining and agriculture, and of conquest over the "despoblado" formerly ranged and inhabited by the Seri. It was during this period that the Seri were permanently dislodged from their outlying haunts and watering-places in Cerro Prieto; and it was during this period, too, that exploration and settlement were extended to Rio Bacuache with such energy as to displace the Seri from their other outlying refuge in the barrancas of this stream. But, as the events and lines of progress multiplied, the burden for the contemporary chronicler

¹The *Noticia de las Personas que han escrito ó publicado algunas obras sobre Idiomas que se hablan en la Republica (of Mexico)*, by Dr José Guadalupe Romero, includes a MS. "Vocabulario de las Lenguas Eudeve, Pina y Seris", written by Padre Adamo Gilg (Bol. Soc. Mex. Geog. y Estad., 1860, tomo VIII, p. 378).

²Dávila, *Sonora Histórico y Descriptivo*, p. 10; Bancroft, *op. cit.*, p. 672.

³*Ibid.*, p. 319.

augmented without corresponding increase in incentive to writing, and it is little wonder that the custom of writing, copying, manifolding, and printing the contemporary records fell into desuetude.

Despite the meagerness of the Franciscan chronicles, the friars of this order are to be credited with making and recording one of the most noteworthy essays toward the subjugation of the Seri—an essay involving the first and last actual attempt to found a Caucasian establishment within Seriland proper. The ecclesiastical corps, sent out from Querétaro college under the presidency of Fray Mariano Antonio de Buena y Alcalde, reached Sonora early in 1768, and were distributed among the missions to which they were respectively assigned before the end of June; and Fray Mariano participated in the efforts to subdue the Seri ensconced in Cerro Prieto. After some months of apparently nominal siege, the hostiles straggled out of their retreat, whereupon “the governor, seeing them assembled and peaceful, besought the friar to instruct and baptize them”;¹ the friar promptly acquiesced, with the provision that he should be furnished with the requisite appurtenances of a mission, including not only a church and sacred ornaments, but a house and living for a resident minister. The requirements delayed procedure, but resulted in the appointment of Fray Juan Crisóstomo Gil de Bernabe (already designated by the Querétaro college as Fray Mariano’s successor) to take charge of the Seri mission. “The new president, desiring to gratify his proper zeal and the insistence of the governor as to the need of those miserable Indians for the bread of doctrinism”, obtained candles and wine from private benefactors, and, despite his inability to find even a hut for shelter, established a sanctuary in the Rancheria de los Seris (Pueblo Seri) on November 17, 1772:

It was impossible to satisfy the ambition of the missionaries to catechize all the Indians, because, although the whole nation was peaceable, no small portion of them were devoid of desire to hear doctrinism, as many of them had withdrawn to their ancient lurking haunts, principally on Isla Tiburon, whence they came to the Presidio Horcasitas, making false displays to the governor of great fidelity and obedience, petitioning that they should not be taken from the island, but should be given a minister to baptize them the same as those at Pitic; and they did not wish to join those nor to leave the rocky fastness of their libertinage and asylum of their crimes. . . . To conceal their purposes, they petitioned that a town for them should be established on the opposite coast, where they might assemble on leaving the island. Their request was embarrassing because on examination of the coast there was found only a single scanty spring in a carrizal in a playa-like country [toda la tierra como de playa], with little fuel and no timber.

Not unnaturally Fray Crisóstomo hesitated to locate a mission on the practically uninhabitable site, in which, moreover, “the mission would be of no utility because the Indians did not really wish to leave their island and submit to religious instruction, nor could the coast supply the necessary food, as it was a barren sand-waste, so that it would become

¹ Crónica Seráfica y Apostólica del Colegio de Propaganda Fide de la Santa Cruz de Querétaro en la Nueva España. . . . escrita por el Padre Fray Juan Domingo Arricivita, 2ª parte, Mexico, 1792, p. 426.



RECENTLY OCCUPIED RANCHERIA, TIBURON ISLAND



TYPICAL HOUSE INTERIOR, TIBURON ISLAND

necessary for the King to constantly supply provisions, else the converts would have a pretext for wandering around and avoiding attention to the catechism.” But the governor was obdurate, and only complained to the viceroy and the Querétaro college. Between fires, Fray Crisóstomo yielded, and on November 26, 1772, proceeded to Carrizal and established himself as a minister, without company or escort save a little boy to serve as acolyte. “With the aid of the Indios Tiburones the friar erected a jacal [or hut bower]¹ to serve as a church, and a tiny hut as a habitation, and began immediately, with the greatest kindness, to convoke the people for religious instruction, only to see that the desires they had expressed to the governor to become Christians were not deep enough to bring them from their island to attend services—except a few who came and took part in the prayers when they thought fit. But as the congregation at the place was only nominal, and with only three jacales under control, so also was the instruction they sought; and because of both the condition of the land and their wandering instinct, which is in them almost a necessity and more excusable than in other Indians, because neither within their island nor on the coast is the territory fit for cultivation, and still less for the stability essential to civil and political life”, the missionary naturally despaired of substantial progress; indeed, “the only fruit for which he could hope, under his mode of living, was reduced either to a child or an adult whom he could, in special circumstances, shrive in extremis.” In this disheartening condition the friar spent the winter from near the end of November to March 6, 1773. Then, as appears from an official declaration, there came to him by night an Indian called Yxquisis, with a trumpery tale about a revolt on the part of the Piato and Apache, which led the guileless friar away from the poor shelter of his jacal under the guidance of the Indian. At the inquest Yxquisis confessed, although with many falsehoods (“con muchas mentiras”), that he had stoned the friar, but “without stating any motive for committing such an atrocious crime”. Yet even before the story reached Horcasitas two “Indios del Tiburon”, supposed to be implicated, were beaten to death with sticks on the spot in which the friar’s body was found,² and the body was buried by a chief of the tribe. And so ended the mission of Carrizal in the land of the Seri.

Traditions of this Franciscan mission still linger about Hermosillo and at Rancho San Francisco de Costa Rica, and they, like Arricivita’s account, indicate that the churchly jacal was planted either hard by Pozo Escalante or at a traditional Ojito Carrizal (Aguaje Parilla, not found in the surveys of 1895), supposed to lie a few miles farther northwestward. All the probabilities point to Pozo Escalante as the site, despite the fact that no cane now grows there; the topographic description applies exactly, while the state of the padre’s remains,

¹ Doubtless the structures approached the conventional Seri pattern, illustrated in the accompanying plate VI, from photographs taken on Tiburon in 1895.

² Arricivita, *op. cit.*, pp. 426-429, 520-524.

when exhumed six months later, attests the dry and saline soil in this vicinity. None of these conditions exist about Aguaje Parilla at the southeastern base of Sierra Seri. The present absence of living carrizal at Pozo Escalante is of little significance, since the extinction of the plant might easily have been wrought either by the stock of later expeditions or by the rise of the salt-water horizon accompanying the local subsidence of the land; certainly dried roots and much-weathered fragments of cane still remain about the margin of the playa extending southward from the well.

The episode culminating in the assassination of Fray Crisóstomo was characteristic: beset at all points and rankling under the invasion of their range, the Seri sought anew to delude the governor with fair words, using their own reprobates and apostates at Pitic and elsewhere to point their asseverations; and remembering the facility with which the earlier ecclesiastics were duped into unwitting allies, they made the kindly and long-suffering friars the immediate object of their petitions. But some of the tribe galled under the lengthy and still lengthening blood-feud too deeply to tolerate the alien presence; and one of these, either alone or supported by the alleged accomplices or others, tried a typical ruse, suggested less by need than inherited habit; for the friar was helpless in their hands, and might have been slain in his jacal as easily as in the open. Typically, too, the assassination initiated or deepened factional dissension and further bloodshed.

The Franciscan records are of even less ethnologic use than those of the Jesuits. Beyond his incidental expressions concerning Seri character and custom in connection with the founding and abandonment of Carrizal, it need only be noted that Arricivita makes hardly a reference to the Tepoka, but habitually combines the "Seris y Piatos"—the latter perhaps representing the "confederate Pima" of "Rudo Ensayo", or the Soba occupying the lower reaches of Rio San Ignacio about that time.

Among the meager and scattered Franciscan records is a letter from Fray Francisco Troncoso, dated September 18, 1824, which is of note as containing an estimate of the Seri population at the time:

This island [Tiburón] has more than a thousand savage inhabitants, enemies of those of California, and it has frequently occurred that, on balsas of reeds, . . . they have crossed over to invade the mission [of Loreto], killing and robbing some of those they found there.¹

The record is of value also as indicating that the Seri traversed the gulf freely, and raided settlements and tribes of the peninsula ruthlessly as those of the mainland.

The Carrizal episode was followed by a half century of comparative silence concerning the Seri, though various contemporary records and later compilations indicate customary continuance of the Seri wars.

¹ Incorporated in Escudero, *Noticias Estadísticas de Sonora y Sinaloa*: Mexico, 1849, p. 18.

Among the more useful compilations is that of Velasco; and among the more important episodes noted by him was the Cimarrones-Migueletes war of 1780.¹ The Cimarrones included the greater part of the Seri of Tiburon and the Tepoka (then estimated at 2,000 of both sexes),² together with the "Pimas called *Piatos*, of the pueblos of Cavorca, Tubutama, Oquitoa, etc", and supposedly certain other representatives of the Pima and Apache, who had shortly before marauded Magdalena and sacked Saric, killing a dozen persons;³ the Migueletes were national troops assigned to Sonora under the command of Colonel Domingo Elizondo. The forces met in several bloody battles in Cerro Prieto, at Jupanguaimas, and at Presidio Viejo; and the former, or at any rate the Seri, were once more "annihilated" ("reducidos a nulidad"). Nevertheless, the hydra-headed tribe retained enough vitality in 1807 to induce Governor Alejo Garcia Conde to send an army of a thousand men to Guaymas, en route to Tiburon, to repeat the extirpation—though the expedition came to naught for international reasons.

Among the more useful contemporary records is an unpublished manuscript report by Don José Cortez, dated 1799, found in the Force library, translated by Buckingham Smith, and abstracted by Lieutenant A. W. Whipple for the Report of the Pacific Railway Survey. A subsection of this report is devoted to "the Seris, Tiburones, and Tepocas". It runs:

The *Seri* Indians live towards the coast of Sonora, on the famous Cerro Prieto, and in its immediate neighborhood. They are cruel and sanguinary, and at one time formed a numerous band, which committed many excesses in that rich province. With their poisoned shafts they took the lives of many thousand inhabitants, and rendered unavailing the expedition that was set on foot against them from Mexico. At this time they are reduced to a small number; have, on many occasions, been successfully encountered by our troops; and are kept within bounds by the vigilance of the three posts (*presidios*) established for the purpose. None of their customs approach, at all, to those of civilization; and their notions of religion and marriage exist under barbarous forms, such as have before been described in treating of the most savage nations. The *Tiburon* and *Tepoca* Indians are a more numerous tribe, and worthy of greater consideration than the Seris, but their bloodthirsty disposition and their customs are the same. They ordinarily live on the island of Tiburon, which is connected with the coast of Sonora by a narrow inundated isthmus, over which they pass by swimming when the tide is up, and when it is down, by wading, as the water then only reaches to the waist, or not so high. They come onto the continent, over which they make their incursions, and, after the commission of robberies, they return to the island; on which account no punishment usually follows their temerity. It is now twenty-three or twenty-four years since the plan was approved by His Majesty, and ordered to be carried out, of destroying them on their island; but, until the present season, no movement has been made to

¹ Noticias Estadísticas del Estado de Sonora; Mexico, 1850, p. 124 et seq.

² Ibid., p. 132.

³ Bancroft, op. cit., vol. II, p. 682. It is incredible that such a confederation of so incongruous elements could ever have been effected; it is incomparably more probable that there was a succession of outbreaks of the Seri, Piato, and Apache, each stimulated by the removal of soldiers for defense against the other enemies, just as Seri outrages follow Yaqui outbreaks today; but it was undoubtedly a custom of the times (a custom still existing) to connect the several enemies in current thought and speech.

put it into execution. To this end the troops of Sonora are being equipped; a corvette of the department of San Blas aids in the expedition and two or three vessels of troops from the companies stationed at the port of that name on the South sea.¹

The record is significant as voicing an ill-founded discrimination of the wandering Seri from the inhabitants of Tiburon, as echoing persistent conception of Tiburon as a peninsula, and as summarizing the characteristics of the tribe recognized at the end of the last century.

Meantime population and industries increased, while civil and military development pursued its course; the Presidio of Pitic expanded into a pueblo, and later into the city which gradually adopted the cognomen of General José Maria Gonzalez Hermosillo, a hero of Sonora in the stirring times of 1810-1812; Pueblo Seri became Mexicanized, retaining only a few Seri families in 1811, according to Manuel Cabrera;² Guaymas grew into a port of some commercial note; pearl fishing progressed along the coast and prospecting in the interior; despite constant harrying by Seri raids, the rancho of Bacuachito (probably the Bacoachizo of Escudero³) became a flourishing pueblo; and plans for ports in the northern gulf were broached and even tested. Moreover, the dawn of the nineteenth century stirred scientific interest in the native tribes, including the obstinate owners of Tiburon—an interest stimulated by Humboldt's American journeys of 1803.

Combining earlier cartography (originating with Kino) and persistent tradition up to the beginning of the nineteenth century, Humboldt mapped "Isla de Tiburon" nearly a degree too far northward, and separated from the mainland by a greatly exaggerated strait. The land portion of the map is strikingly defective, revealing in numerous imaginary mesas the author's penchant for Mexican plateaus, while "Rio Hiaqui" ("de Yaqui ou de Sonora" in the text) is combined with Rio Sonora and given an intermediate position, and "Rio de la Ascencion" (Rio San Ignacio) is represented as passing through an estuary into the gulf just off the northern end of Tiburon; the "Indiens Seris" being located on a figmentary mesa north of the latter river and due west of Caborca, Pitic (apparently a composite of San Diego de Pitic, or modern Pitiquito, with San Pedro de Pitic, or modern Hermosillo), and Altar.⁴ His text corresponds:

On the right bank of Rio de la Asencion live some very bellicose Indians, the Seris, to whom many Mexican savants ascribe an Asiatic origin by reason of the analogy offered by their name with that of the Seri located by the ancient geographers at the base of the Ottorocorras mountains.⁵

¹Reports of Explorations and Surveys to ascertain the most practicable and economical Route for a Railroad from the Mississippi River to the Pacific Ocean, vol. III, part 3: Report upon the Indian Tribes, 1855, pp. 122-123. The original Cortez manuscript is now in the Library of Congress.

²In Velasco, op. cit., p. 137.

³Noticias Estadísticas de Sonora y Sinaloa, Compiladas y Amplificadas para la Comision de Estadística Militar, por el Lic. D. José Agustin de Escudero; Mexico, 1849, p. 88.

⁴Atlas Géographique et Physique du Royaume de la Nouvelle-Espagne, par Al. de Humboldt; Paris, 1811, carte générale.

⁵Voyage de Humboldt et Bonpland, troisième partie: Essai Politique sur le Royaume de la Nouvelle-Espagne, tome I; Paris, 1811, pp. 296-297.

Naturally most of the scientific inquiries of the time were, like those of Humboldt, based on tradition rather than on direct observation.

Toward the end of the first third of the century an important contribution to actual knowledge of Seriland and the Seri at last grew out of the pearl industry. In May, 1825, Lieutenant R. W. H. Hardy, R. N., was commissioned by the "General Pearl and Coral Fishery Association of London" to investigate the pearl fisheries of the Californian gulf; and his task was performed with promptness and energy. On February 13, 1826, he visited Pitic (under Hermosillo):

Half a league short [south] of it is another small place, called the Pueblo de los Céres, inhabited by a squalid race of Indians who are said to indulge in constant habits of intemperance and to have lost the fire of the warrior. In its stead they manifest the sullen stupidity peculiar to those who, feeling themselves unfitted for companionship, strive to vent their pusillanimous rage upon objects the most helpless and unoffending, such as women, children, and dogs, who appear to be the chief victims of their revenge.¹

His chief object in visiting Pitic was to obtain information concerning Tiburon, its natives, and its pearl-oyster beds; and he was rewarded with characteristic accounts of the ferocity of the tribesmen and their use of poisoned arrows, which he received with some incredulity.²

After examining the principal pearl fisheries of the western coast, Lieutenant Hardy reached the "Sal si Puedes" in the throat of the gulf, and, on August 9, "got aslant of wind, which carried us up to the northwest end of Tiburow island"³—i. e., apparently over the precise route sailed by Padre Ugarte in 1721. Anchoring on the island, he had the good fortune first to meet a native able to speak Spanish, and later to successfully treat the sick wife of the principal chief, after which he was treated with great consideration, and—unwittingly on his part—adopted into the tribe as a member of the chief clan by the ceremony of face painting, the symbol being that of the turtle totem, to judge from the superficial description. Taking slightly brackish water, just as Ugarte had done one hundred and five years before, and arming his crew, he spent the night near the rancheria (evidently in Bahia Agua Dulce). Next morning he "traveled over the greater part of the island" (!) in fruitless search for pearls and gold, and in the afternoon "got under weigh, and stood into a bay of the continent to the northeast of the island," discovering and naming "Sargent's Point", together with "Cockle Harbour", and "Bruja's bay" in the lee of the point, and also "Arnold's Island"; this island being apparently the present prominent cusp of Punta Sargent, now connected with the mainland by a continuous wave-built bar rising a little way above reach of tide. Anchoring in the bay named from his vessel (*La Bruja*), he examined the adjacent shore, ascertaining that "there is no fresh water near the spot, except

¹ Travels in the Interior of Mexico in 1825, 1826, 1827, and 1828; London, 1829, p. 95.

² Ibid., p. 107.

³ Ibid., p. 280.

during the rainy season, which only lasts about a month or six weeks", nor "any vestige of Indians to be seen except a solitary hut erected by the Tiburons to serve them when they go there to fish"; and, noting the report that Padre Kino had visited this point, he quite appositely questioned the truth of the tradition, partly on the ground of the absence of fresh water, partly because "the Tepoca Indian establishment" mentioned in the tradition "is many leagues farther to the northward." Awakened by an approaching storm, he was under way next morning at daylight, and, getting out of the "bad holding ground", was caught by a gale and carried back to his "old anchorage in Freshwater Bay", where he found the Indians rejoicing over the success of a ceremonial incantation to which they ascribed his return. The reconnaissance map is ill-drawn, locating "Fresh Water B." on the mainland side and apparently combining "Sargent's Point" and "Arnold's Island" as "Sargents I."; "San Miguel Pt." is properly located, and idealized route lines traverse the "Canal peligroso de San Miguel" (El Infiernillo), which is of greatly exaggerated width. The careful itinerary shows, however, that Hardy scarcely entered this strait, and made but three or four anchorages in the vicinity—i. e., in Bahia Agua Dulce, in Bahia Bruja, probably in Cockle harbor (or "Cochla Inlet"), and finally off Isla Patos.

Hardy's notes on the Indians are first hand, and hence of exceptional value. He says:

The Indians on the island of Tiburon are very stout, tall, and well-built fellows, exceedingly like the Twelchii tribe of Indians in Patagonia, and with a language so like theirs that I imagined I was transported back into those wild regions. They by no means look so ferocious as they are represented, and there is something peculiarly mild in the countenances of the females. Their dress is a sort of blanket, extending from the hips to the knees. But most of the old women have this part of the body covered with the skins of the eagle, having the feathers turned *towards the flesh*. The upper part of the body is entirely exposed, and their hair is dressed on the top of the head in a knot which greatly sets off the effect of their painted faces. The men use bows and stone-pointed arrows; but whether they are poisoned I do not know. They use likewise a sort of wooden mallet called Macána, for close quarters in war. They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 5 degrees. The insides of these two points, which are 6 inches long, are jagged; so that when the body of a fish is forced between them it cannot get away on account of the teeth.¹

He saw "about fifteen or twenty canoes made of three long bamboo bundles fastened together", and observed that, when engaged in turtle fishing, the Indian "paddles himself from the shore on one of these by means of a long elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mesquite, growing near the coast", this pole serving also as a harpoon shaft, provided with a harpoon head and cord, such as those still in use. Respecting the invocatory appurtenances, he says:

My attention was directed by the old women to a pile of bushes outside the hut, which had a staff of about 5 feet in length sticking up through the center. From

¹ Op. cit., p. 289-290.

the upper end of the staff was suspended by a cord 12 or 14 inches long a round stone ball, and to this ball was fastened another string furnished with bits of cork, surrounded with small feathers stuck into them at the distance of about 3 inches apart: the only use of the stone ball being to prevent the wind from blowing out horizontally the string which was furnished with feathers. . . . Upon examining the bushy pile, I discovered a wooden figure with a *carved hat*, and others of different shapes and sizes, as well also as leathern bags, the contents of which I was not permitted to explore.¹

He also mentions that "in their festivities the Indians wear the head (with the horns on)" of the bura or mule deer. He adds:

It is believed that the Céres Indians have discovered a method of poisoning their arrows, and that they do it in this way: They kill a cow and take from it its liver. They then collect a number of rattlesnakes, scorpions, centipedes, and tarantulas, which they confine in a hole with the liver. The next process is to beat them with sticks in order to enrage them, and being thus infuriated, they fasten their fangs and exhaust their venom upon each other and upon the liver. When the whole mass is in a high state of corruption the old women take the arrows and pass their points through it. They are then allowed to dry in the shade, and it is said that a wound inflicted by them will prove fatal. Others again say that the poison is obtained from the juice of the yerba de la flecha (arrow wort).²

He purchased some of the arrows, which were stone-tipped, and had "certainly had an unguent applied to them".

He was impressed by indications of family affection, and noted the custom of having two wives. Concerning tribal relations he says:

These people have been always considered extremely ferocious, and there is little doubt, from their brave and warlike character, that they may formerly have devastated a great part of the country; but in modern days their feuds are nearly confined to a neighboring tribe of the same name as themselves (Céres), who speak the same language and in all probability originally descended from the same stock. They are said to be inferior to those of this island both in courage and stature, and they are never suffered to cross the channel. From what I was told * * * the Tiburow Céres have lately returned from a sanguinary war with the Tépoca Céres, in which the former were victorious.³

Later in his itinerary Hardy noted a typical Yaqui revolution, with a characteristic effort to secure the cooperation of the Seri.⁴ He defined the Seri habitat as "the island of Tiburow, the coast of Tépoca, and the pueblo of Los Céres, near Pitic";⁵ and he estimated the population at "3,000 or 4,000 at the very utmost",⁶ and quoted the estimate of Don José Maria Retio, viz, that the Seri population of Tiburon was 1,000 to 1,500.⁷

Like most of those visitors to the Seri who have returned to tell their tale, Hardy "praised the bridge that carried him over" and gave the tribe passable character—worse, of course, than that of any other, yet hardly so bad as painted at Pitic.

A noteworthy traveler in western America during 1840–1842 was M. Duflot de Mofras, an attache of the French legation in Mexico. He

¹ Op. cit., pp. 294–295.

² Ibid., pp. 298, 299.

³ Ibid., pp. 299, 300.

⁴ Ibid., p. 395 et seq.

⁵ Ibid., p. 437.

⁶ Ibid., p. 438.

⁷ Ibid., pp. 235, 540.

traversed the Californias and entered Sonora, and while he failed to see Seriland, he made a note on the tribe, valuable as a current estimate of the population:

At the gates of the city of Hermosillo is established a Mission which contains 500 Seri Indians; 1,000 of them inhabit the coast to the north of Guaymas and Île du Requin (Isla del Tiburon).¹

The next noteworthy episode in the external history of the Seri chronicled in the civil records of Sonora culminated in 1844. "The above-named Seris, although their number never became important, did not abandon their propensity to revolt, and, while they never rose en masse, made many factional uprisings. Ultimately . . . they displayed such boldness, robbing ranchos, assassinating all they encountered, assaulting on the roads arrieros and other travelers", that a considerable force was sent against them from Hermosillo under the direction of Captain Victor Araiza. It was planned to support this land force by a sea party from Guaymas, but delays and misunderstandings caused the practical abandonment of the plan. Tiring of the delay, Araiza "declared war on the Indians, surprising them on Punta del Carrizal, killing 11, including several innocent women and children", and taking 4 captives of from 1 to 11 years in age; whereupon the army returned to Hermosillo.²

Disapproving of this undignified and inhuman crusade, the acting governor, General Francisco Ponce de Leon, planned a still more vigorous campaign by land and sea for the purpose of capturing the entire tribe and transporting them to Pueblo Seri, where a few of their kin were still harbored.³ The command was intrusted to Colonel Francisco Andrade, who took personal charge of the land force, including 160 infantry from Guaymas, 60 infantry and 30 cavalry from Hermosillo, and considerable corps from Horcasitas and Altar. The naval auxiliary, in charge of Don Tomás Espence,⁴ pilot, comprised a schooner of 12 tons; two launches, one carrying a 4-pound cannon and the other a 2-pound falconet; and one rowboat. On August 11, 1844, Espence sailed from Guaymas, and six days later cast anchor at the embarcadero (apparently a convenient place on the coast of Bahia Kino due west of Pozo Escalante—the Embarcadero Andrade of figure 1) opposite Tiburon. Andrade marched from Hermosillo August 13,

¹ *Exploration du Territoire de l'Orégon, des Californies et de la Mer Vermeille, exécutée pendant les années 1840, 1841 et 1842, tome I*; Paris, 1844, p. 214.

² Velasco, *Noticias Estadísticas*, pp. 124, 125. This chronicle is rendered peculiarly valuable by supplements in the form of Andrade's and Espence's journals, the latter incorporated (p. 125) after Velasco's own writing was completed. The whole was revised, extended, and republished in the several volumes of the first series of *Bol. Soc. Mex. Geog. y Estad.*, 1861-1866.

³ On August 14, 1844, Secretary Manuel Cabrera reported that "there are in this pueblo not more than fifteen families of Ceris located within its borders, maintaining themselves by the manufacture of earthen ollas and by the garbage of their neighbors, i. e., in time of harvest they glean the wheat and corn left scattered, and the bones, entrails, and hoofs of the stock slaughtered for consumption by the inhabitants." (Incorporated in Velasco, *op. cit.*, p. 138.)

⁴ Thomas Spence, of Guaymas; apparently the "Mr. Spence" mentioned favorably by Hardy (*Travels*, p. 90).

reached Carrizal August 16, and had detachments at the coast to meet the squadron the next day. Both the vessels and this detachment were out of water, and next morning Espence, taking a few soldiers and an Indian guide, made his way to Tiburon in search of springs; but "on arriving it turned out that the Indian had deceived the party or did not wish to reveal the water." Nevertheless they landed, and Espence hoisted the Mexican flag, "taking possession of the island in the name of the Mexican Government, as the first civilized person to touch the soil." Afterward he divided his force, and he and the sailors wandered far, spending the entire day in vain search for water. Toward evening he "made the men wade into the sea up to their necks, and in this manner mitigated somewhat their burning thirst." Meantime the soldiers had traveled inland some 6 or 8 miles, and found water at the head of an arroyo (apparently a temporary tinaja west of Punta Narragansett), but it was surrounded by Indians, who at once gave battle. Such was their thirst that the soldiers held their ground, drinking one at a time under the protection of their comrades. At length they killed two chiefs (one of whom wore a jacket taken from one Hajar, robbed on the Cienega road a few days before), and succeeded in withdrawing to a small eminence and sheltering themselves behind a rock. Later they effected a retreat without loss, and of course without water, so that they arrived at the shore even thirstier than the sailors. Making their way back to the mainland during the night, the party were relieved the following day by mule-loads of water sent over from Carrizal. On August 20 Colonel Andrade marched to the coast with most of his force, leaving a detachment to guard the route; and the next day Espence transported to the island 125 troops, 16 horses, and some mules and cattle, without other accident than the drowning of a mule and a steer "by the strength of the current". Suffering much from thirst, the troops pressed inland to the watering-place already discovered, where they camped. The next day Colonel Andrade, with Lieutenant Jesus Garcia, worked northward, finding another watering-place (doubtless Tinaja Anita) $3\frac{1}{2}$ leagues distant from the first; and this was made headquarters for the force. Several parties were sent out in search of water and Indians. A few watering-places were found, and a number of women and children with a few men were captured, though the journals indicate that the excursions were of limited extent only. Meantime Espence brought over the baggage and provisions; and on August 24, leaving a launch and a rowboat for the use of the troops, he sailed northward through the strait, and three days later, after passing many bars of sand, entered the bay at the extreme north (Bahia Agua Dulce), opposite Punta Tepopa, finding sharks swarming in thousands. Here he found fresh water 250 paces from the beach—the water which sustained Hardy eighteen years before, and Ugarte over a century earlier still. He found no Indians here, but a number of jacales and balsas (which he

immediately burned), as well as bones and other remains of horses.¹ On August 28 and 29 Espence skirted the abrupt and rocky coasts of Tiburon, west and south of the northern bay, without seeing trace of natives; on the 30th he reached the western bay, where he found huts and fresh tracks, and captured a woman disabled by snake-bite. Farther down the bay he encountered a considerable party, who first prepared to attack, and then, overawed by his bold front, sued for peace; whereupon he accepted their submission, and sent them with a letter to Colonel Andrade. This affair concluded, and escaping currents so contrary that he was nearly locoed ("por las corrientes encontradas que me volvian loco"),² he coasted southward; and on September 1, at the southwestern point of the island, he found another rancheria, and made peaceful conquest of the occupants, whom he also sent with a letter to Andrade. Thence he coasted eastward, and, on September 3, returned to his starting point, "having navigated the island in the period of nine days, having in this time burned 64 huts and 97 balsas, and reduced to peace 104 Indians with their families." The next day he transported the captives to the mainland, "their number, comprising men, women, and children, reaching 384, besides about 37 remaining at large on the island."³ On September 5 the remaining troops were transferred to the mainland, with the exception of a small detachment, which remained for an unspecified, but evidently short period, in the vain hope of corralling the warriors, with the families to which they belonged, supposed (on grounds not given) to remain on the island. The troops and their captives immediately moved to Laguna de los Cercaditos (probably Laguna la Cruz) to rejoin the cavalry guard; thence, suffering much from thirst, they marched toward Hermosillo, arriving at that place September 12,⁴ where the troops and captives formed a triumphal procession, met on the highroad by the merchants and the civil and military authorities, and greeted by the ringing of bells and the firing of rockets, and with music and refreshments.

¹ The expressions of the journal indicate that Espence was not familiar with the Seri custom of eviscerating and quartering stolen stock, consuming the entrails at once, and transporting the more substantial pieces across the strait on their balsas. Velasco fell into still further error in assuming that the expressions relate to tracks and other indications of the presence of living stock on the island.

² Velasco, *op. cit.*, p. 168.

³ *Ibid.*, p. 169. On the same page Espence classifies the captives as 6 oldsters ("viejos de sesenta años arriba"), 12 beldames ("viejas de cuarenta arriba"), 1 blind, 1 idiotic boy, 5 cripples male, 1 cripple female, 180 women, 160 children, and 144 men—510 in all. Andrade's report enumerates the captives as 120 in each of two lots, with 20 or more in a third, making 260 odd (*ibid.*, p. 180); while Velasco put the number at 200 and odd ("docientas y tantas personas"), men, women, and children, including only 30 odd oldsters and warriors combined. The discrepancies are characteristic, and of a piece with those prevailing in the same latitude and longitude today: e. g., Velasco says there are but four waters on the island, Espence says there are eight or ten, and Andrade implies that there are many; Velasco says there were 160 troops from Guaymas, while Andrade mentions only 80; Espence says that in transporting the stock (as noted above) but one mule was drowned by the strength of the current, while Andrade says that a mule and a steer were lost on account of the bad storm which prevailed during the day; yet there is such agreement between dates and facts in the independent journals of Andrade and Espence as to establish general verity despite the provincial weakness concerning details.

⁴ According to Andrade (*ibid.*, p. 182); Velasco says September 16 (*ibid.*, p. 126).

The captives were imprisoned over night in the mint, the children weeping, the women chattering angrily or humbly, and the men sulking. Next day the Hermosilleños began distributing the children among themselves, some families taking three and many two, while the adults were transferred to Pueblo Seri, placed in charge of a single keeper, and set to gathering fuel, etc. Naturally this unstable status did not long persist; "within two months they began to disappear, fleeing to their respective and native haunts, stealing and carrying with them the children from whom they had been separated";¹ and, according to Espence, they committed "many murders on the Pitic and Guaimas roads" as they returned to Tiburon.²

While the Tiburon captives were escaping, the campaigning continued; and, in November, 1844, several Seri families, comprising 63 men, women, and children, who had been scavenging Rancho del Burro ("manteniéndose allí á merced de los desperdicios de dicho rancho"),³ were captured and transported to the mint at Hermosillo, and soon afterward transferred to Pueblo Seri. During the same month a report came from Rancho del Pocito, on the Guaymas road, that Seri marauders (assumed to belong to the 16 families left on the island) had killed 10 head of stock; and a detachment of 15 cavalry was sent to inflict punishment. Early in December this party met a Seri force of over seventy warriors, including some of those captured on Tiburon and escaped from Pueblo Seri; after a battle of four hours the troops found their ammunition exhausted, several of their carbines out of order, and all but four or five of their horses winded; so that they were driven to parley with the Indians and to procure their surrender by pacific means—especially promises of good treatment.⁴ Subsequently a municipal commission from Hermosillo reminded the defeated Seri of their surrender, and "three, four, or eight" of them presented themselves ("presentándose tres, cuatro ú ocho hombres"), and were probably added to the colony at Pueblo Seri.

Espence's journal clearly indicates a complete circumnavigation of Tiburon, the second in history (that of Ugarte in 1721 being the first); and naturally some of his notes are of ethnologic value:

The Ceris Indians are tall, well formed, not very corpulent; the women are remarkable for small breasts and feet and high insteps. At night they travel ill; this is to be attributed to the reflection of the sun on the sand, which is quite white, and as they all live on the shore where they gain sustenance, which is fish and plankton [marisco], they are daily exposed to a glare which injures their vision. Their favorite food is turtles and horses. . . . They are all in the most savage condition it is possible to conceive. Their language is guttural, and they are most filthy in their persons, as in their food, which is mostly eaten raw, or at the best half

¹ Velasco, *Noticias Estadísticas*, p. 127.

² *Ibid.*, p. 170.

³ *Ibid.*, p. 128.

⁴ *Ibid.*, p. 129. This naive recital is far from unique among the chronicles of conquest over the Seri. All of the records recount victories more or less brilliant, even when there are strong indications between lines that the Caucasians were outnumbered, outfought, forced from the field, and even driven into the protection of the pueblos. The Seri side of the story has never been told.

cooked; they endure a thousand miseries on the island, yet the love they have for it is incredible. They are always accompanied by innumerable dogs, . . . which they have domesticated.¹

Velasco adds:

The Ceris subsist on fish, the seeds of grass, and coastwise shrubs, as well as on the flesh of horses and deer, which they kill. There is no better proof of this fact than this—on approaching the said Ceris, one instantly perceives that their bodies exhale an intolerable stench, like that of a corpse of eight or more days, totally rotten, so that it is necessary to withdraw far as possible from them.²

Of all the Indian tribes known in Sonora, none are more barbarous and uncivilized than the Ceris. They are perverse to the limit, vicious beyond compare in drunkenness, infinitely filthy, the bitterest enemies of the whites, like the worst of the Indians.³

He adds also that the men wear a pelican-skin robe and a breechclout of cotton cloth, with most of the body uncovered; "they have their faces painted or barred with prominent black lines. They use no foot-gear of any kind, and many have the nasal septum pierced and adorned with pieces of greenstone or ordinary glass." "They are robust in stature, tall and straight, generally with bright black eyes. The women are not uncomely, and of bronzy color [*de color abronzado*]. Their clothing is made of pelican skins fastened together, retaining the feathers; with this they are covered from the waist downward", the remainder of the body being bare. The women of Hermosillo provide them with cast off garments when they approach the city, and these they wear, unwashed, until they fall to pieces. "The said tribe, in addition to being the vilest and most brutal known in the country, are preeminently treacherous and traitorous, so that forty of their outbreaks may be counted during the efforts to reduce them to civilized life." At the time of the Cimarones outbreak, the Seri of Tiburon and Tepoka numbered 2,000; "to day [about 1846 or 1847], counting the 259, which are all that inhabit Tiburon and the most that can be presented, including the Tepoka Seri [*los Ceris Tepocas*], who have always been much fewer, their whole number will not amount to 500 persons of all sexes and ages, and the warriors can not exceed 60 or 80 at the most." The Seri are not polygamous, though apparently promiscuous ("*se nota en sus matrimonios mucha tolerancia mútamente*"). They "adore the moon, which they venerate and respect as a deity; when they see the new moon, they kneel and make obeisance; they kiss the earth and make a thousand genuflections, beating their breasts."⁴

The remarkably vigorous expedition of Andrade and Espence occurred within the memory of men still active, and naturally it lives in tradition at Hermosillo and Bacuache, and among the ranchos lying toward the border of Seriland; indeed, one of the two Mexicans accompanying the 1895 expedition, Don Ygnacio Lozania, retained shadowy impressions of participating in an invasion of the island, which could have been none other than that planned by Governor De

¹ Velasco, *Noticias Estadísticas*, pp. 169-171.

³ *Ibid.*, p. 129.

² *Ibid.*, pp. 127-128.

⁴ *Ibid.*, pp. 131-133.

Leon and executed by Colonel Andrade. Yet it is not uncharacteristic of Sonoran history that the wave of anti-Seri activity culminating in 1844 hardly outlasted its own breaking; certainly Escudero, writing less than five years later, declared of “la nacion *Seri*”: “During thirty-three years they have committed not a single act of hostility and live in peace and perfect harmony with the Sonorenses.” He added that they occupied the islands of Tiburon and Tepoca (sic) and the coasts of the gulf contiguous to Sonora and California, and from the most remote antiquity had been known by the names of “*tiburones*” or “*seris*”. Describing Pueblo Seri, he observed: “It now contains hardly a dozen aged Seris of both sexes”; and he forecast the early extinction of the tribe, since the people were incapable of abandoning their independent and solitary existence.¹

Here ends, practically, the history of Pueblo Seri as a Seri settlement, for, although one of the tribe survived for half a century and a few others may have survived for a decade, the “aged Seris of both sexes” melted away so rapidly as to leave no later record, and were apparently never replaced by others. Briefly, the history of the pueblo began with the establishment of a presidio or military post in 1741 in the natural gateway and watering-place leading into the settled valleys of the Opodepe and upper Sonora, for the sole purpose of protecting the settlements against the wandering Seri, who used this typical Sonora watergap as a way-station on forays but never as a place of residence. The history grew definite when the Jesuits obtained the allotment of lands for the Seri and established for them a mission, which was at the same time a place of catechizing for Seri neophytes, a place of detention for Seri captives, a place of refuge for Seri weaklings, and a place of resort for Seri sneaks and spies. The history proceeded with many vicissitudes, as the presidio was alternately abandoned under Seri attacks and reoccupied when the attacks were repulsed, and as the neophytes alternately escaped and suffered recapture; the formal history waned in relative importance as the population and interests of Pitic and afterward of Hermosillo waxed, and as the lands originally allotted to the Seri were gradually taken and held by Mexican settlers, and ended when the Seri tenure was formally extinguished in 1844, as described by Cabrera and Velasco; and the general history dropped into unimportance with the escape of Andrade’s captives, after temporary quartering on the legally established landholders and householders of the Mexicanized pueblo. For a century and a half the name of the pueblo has continually raised and renewed the assumption that it marks a site of aboriginal Seri habitation or has played some other leading rôle in Seri history, and this assumption has shaped opinion past and present; yet its error is clearly shown by scrutiny of the historical records, as well as by collateral ethnologic and archeologic evidence.

¹ Noticias Estadísticas, pp. 141-142.

Here may be said to end, too, the local chronicles of the Seri; for although the state archives are crowded with charges, petitions, commissions, reports, and other papers pertaining to the irrepressible Seri; although these materials have overflowed to Ciudad, Mexico, and even to Washington, in official documents both numerous and voluminous; although Dávila in 1894 increased Velasco's forty Seri wars to fifty; and although the weightiest events in the internal history of the Seri have occurred since 1844, little attempt has latterly been made to reduce the abundant data to print.

The Mexican geographic knowledge of the time was surprisingly vague, as is shown by the current maps, for example, the Tanner maps which appeared in several editions: the 1846 edition recalls and evidently reflects the Humboldt map of the beginning of the century; "R. Ascencion" is represented as embouching through an estuary about $30^{\circ} 20'$, with the "Seris Indians" north of its lower half-length and west of "Pitic" and "Ft. del Alter"; Ures is located 3 or 4 miles southeast of this fort, and "Racuach" (the Bacuachito of the present) is 20 miles farther southeastward. Neither Rio Sonora nor any of its important branches are indicated, while "Pitic" is placed several times too far from the coast and from Guaymas, in a featureless expanse of paper; "Rio Hiaqui" is shown as a branchless and conventional stream of a single crescentic curvature, embouching in about the right latitude. The coast of the gulf is distorted, and "Tiburon" is shown as an island much too large and nearly a degree too far north, separated from the mainland by a greatly exaggerated strait, with an elongated mesa ("Mt. del Picu") skirting the mainland coast—in short, the cartography is largely traditional if not fanciful.¹

The career of the Seri during the half century 1844–1894 is traceable by aid of (1) unpublished documents, (2) published results of scientific inquiries and surveys, and (3) personal reminiscences of men living on the Seri frontier; but in a summary touching only salient points the first-named source may be passed over.

One of the first foreign visitors to follow Baron Humboldt in systematic inquiries concerning the aborigines of northwestern Mexico was Henri Ternaux-Compans; his information, too, was secondhand and remote, yet he correctly recognized Isla Tiburon as "inhabited by the Seris, who have some huts also on the mainland".²

Later came Eduard Mühlenpfordt, an attaché of a German commercial company and later a Mexican state official, who traveled extensively and wrote partly at first hand, though there is little indication of personal acquaintance with Seriland or the Seri: he described "Bahia de San

¹A Map of the United States of Mexico, as organized and defined by the several Acts of the Congress of that Republic, constructed from a great variety of Printed and Manuscript Documents, by H. S. Tanner. Third edition, 1846. The map in De Mofras (op. cit., atlas) is little better.

²Nouvelles Annales des Voyages, tome III, 1842, p. 320 (cited by Buschmann, Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden, in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement Band; Berlin, 1859, p. 219).

Juan Bautista", with "the small island San Augustin" lying before it (in such manner as to identify this islet with Isla Tassne), and located "the large island Tiburon farther northward, opposite a mountainous coast".¹ He added:

The waterless but cattle-stocked plains between the place Pitic and the coast, and thence up to the river Ascension, are inhabited by a meager remnant of the Seri tribe, while on Tiburon island, opposite this coast, the Tiburones dwell. The Seris were formerly very numerous, by far the fiercest of all the Indian tribes of northern Mexico, and very warlike. Through ceaseless war with the Tiburones and the troops from the Spanish presidios they are now nearly extinct.²

Elsewhere the Tiburones were characterized as enemies of the Seri,³ while the "Heris" tribe was enumerated as a branch of the "Pimas Bajas" people. Herr Mühlenpfordt's characterization of the Seri and the Tiburon islanders as enemies would appear to be groundless, yet not wholly incomprehensible; in the first place, the earlier literature indicates that the term Seri (Seris, Ceris, Heris, etc.) was an alien designation of lax application,⁴ doubtless extended occasionally or habitually to marauding nomads, regardless of affinity; again there is conclusive evidence that in many instances Seri convert-captives attached to the missions and pueblos were often regarded as tribal apostates and outlaws whose lives were forfeit; and, moreover, the region in which Herr Mühlenpfordt gained his information was and still is one of abounding tale, whose frequent exaggeration and not infrequent invention conceal and distort the simple facts.

In 1850, Don Diego Lavandera transmitted to the Mexican Society of Geography and Statistics, through the hands of Señor José F. Ramirez, certain documents, accompanied by a note to the effect that "The tribe of the Seris speak Arabic, and it is understood by the Moors at the first interview"—this note merely expressing a prevailing current opinion. Undertaking to test the opinion, Señor Ramirez sent to Lavandera, in Sonora, a number of words in three Arabic dialects, at the same time asking for the Seri equivalents; and the inquiry yielded a Seri vocabulary (probably the first ever printed) of eleven words. Of these none show the slightest affinity with the Arabic dialects; at least four (horse, chamber, population, wine) express concepts alien to the Seri; and only three or four can be identified with Seri terms recorded in later vocabularies. No reference is made to Señor Lavandera's aboriginal informant; but there is a strong presumption that it was the official interpreter at Hermosillo and Pueblo Seri—a presumption

¹ Versuch einer getreuen Schilderung der Republik Mexico besonders in Beziehung auf Geographie, Ethnographie, und Statistik: Hannover, 1844, Band I, p. 441; Band II, p. 415.

² Ibid., Band II, pp. 419-420.

³ Ibid., Band I, p. 210.

⁴ Peñafiel defines "Seris" as the "name of a tribe of Sonora, originating probably in the Opata language" (Nomenclatura Geográfica de México—Etimologías de los Nombres de Lugar . . . por el Dr. Antonio Peñafiel, primera parte, 1897, p. 225); while Pimentel defines two suggestively similar Opata words, "*Serarai*, paso menudo y bueno", and "*Sirerai*, velocidad de la persona que corre" (Vocabulario Manual de la Lengua Opata, Bol. Soc. Mex. Geog. y Estad., tomo X, 1863, p. 306), i. e., a good and direct pace, and the speed of a person running, respectively (cf. *postea*, p. 125).

warranted by coincident historical records and statements of contemporaries still living, to the effect (1) that an official interpreter was there then and for a long time later, (2) that neither then nor later were there other Seri representatives able to furnish vocabularies at Hermosillo, Pueblo Seri, or other towns, and (3) that at that time (as at most others) the relations between the Seri and the whites were such as to prevent amicable communication through casual meeting or otherwise.

Proceeding with his discussion, Señor Ramirez sought to correct the allegation of Abbé Hervas that "in the mission of Belen live three nations, called Hiaqui, Seri, and Guaima, who speak *three different languages*." After quoting a Jesuit manuscript of July, 1730, reporting that "the language of the Seris is the same as that of the Guaimas", he added a significant statement contained in a manuscript report from the Bishop of Sonora, directed to Don José de Galvez, under date of September 20, 1784, concerning the mission of Belen: "Two nations of Indians, Pimas Bajos and Guaimas, live united, the latter having abandoned their pueblo under the continuous assaults of the Seris. The Pimas use their own language. . . . The Guaimas use their ancient language." Summarizing the evidence (of course secondhand and derived from the observations and reports of the missionaries), Señor Ramirez held as proved, first, "the existence of two diverse languages at the mission of Belen—that of the Guaimas and that of the Pimas Bajos"; and second, that "the Guaimas and the Seri are the same".¹ It would appear that Señor Ramirez hardly appreciated the significance of the statement of sixty-four years before that the Guaymas were still using their "ancient" language, with the implication that they were acquiring familiarity with the Piman tongue—a familiarity that may well have misled later inquirers.

It is just to say that scientific knowledge of the Seri began with the visit to Hermosillo of United States Boundary Commissioner John Russell Bartlett, on December 31, 1851. True, Commissioner Bartlett approached no nearer Seriland than Hermosillo and Guaymas, and saw but a single Seri; yet he obtained an excellent vocabulary and considerable collateral information from this Indian. According to this information—

The Ceris tribe of Indians, with the exception of those which are christianized and reside in the village near Hermosillo, occupy the island of Tiburon in the Gulf of California, north of Guaymas. Although believed not to number over 100 warriors, they have long been the dread of the Mexicans between Guaymas and Hermosillo, as well as the country to the north, on account of their continual depredations and murders. Their practice is to lie in wait near the traveled roads, and there surprise small and unprotected parties. Their place of abode being on an island or the shores adjacent, and their subsistence being chiefly gained by fishing, they have no desire to steal animals, which would be of no use to them; nor do they take any prisoners. To murder and plunder small parties of Mexicans seems

¹ *Lenguas Primitivas*, in *Boletín del Instituto Nacional de Geografía y Estadística de la República Mexicana*, third edition, tomo II; Mexico, 1861, pp. 148-149.

to be their only aim, and every arrow or lance thrown by the Ceris that pierces the skin causes death, as all are poisoned. Many expeditions, fitted out at a great expense, have been sent against them; but, though commanded by competent officers, all have failed. The number being so small, they manage when pursued to conceal themselves where they can not be found. The island of Tiburon, as well as the mainland adjacent, is exceedingly barren and destitute of water; hence parties have suffered greatly in the campaigns against them, without accomplishing anything. I was told that the Government had already expended more than \$1,000 for every male of the tribe. The last serious attack of these people was made upon a gentleman traveling to Guaymas in his carriage with his family and attendants, embracing 16 persons. They were surprised in an unfrequented place and every soul put to death.¹

Commissioner Bartlett quoted Hardy's description of the arrow poison, and, speaking of the Seri tongue, added:

I found it an extremely harsh language, very difficult to express with our letters, and totally different from any aboriginal tongue I had heard spoken; . . . but it was impossible for me, without a close philological comparison with other Indian languages, to arrive at any correct conclusion as to whether this people are allied or not to other aboriginal tribes.

He also referred to a prevalent notion that "the Ceris were of Asiatic origin, in proof of which some statements were made too improbable to repeat. This idea seems to have originated from the resemblance between their name and that given by the ancients to the Chinese."

In order to obtain a Seri vocabulary, Commissioner Bartlett had a messenger dispatched "to a pueblo or village of these Indians near Hermosillo. The person sent for made his appearance in a few hours"; he was "a good-looking man, about 30 years of age. His complexion was fair, and resembled that of an Asiatic rather than an American Indian. His cheek bones were high, and his head round and well formed, though the anterior portion was somewhat angular and prominent. His hair was short, straight, and black. He was a full-blooded Ceris, and came originally from the island of Tiburon. In about three hours I completed the vocabulary quite satisfactorily to myself."² The vocabulary was not printed with the narrative; nor were references made to the Seri population, either in the pueblo or in Seriland.

While the vocabulary was not published by Commissioner Bartlett, it was preserved and passed into the hands of George Gibbs, who made a systematic transcript;³ this came into possession of Dr Albert S. Gatschet, and a copy is preserved in the archives of the Bureau of American Ethnology. The name of the native informant is not recorded, but fortunately he was found still living, and was fully identified, during the expeditions of 1894 and 1895—especially toward the end of the

¹ Personal Narrative of Explorations and Incidents in Texas, New Mexico, California, Sonora, and Chihuahua, Connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53; New York, 1854, vol. I, p. 463 et seq.

² Ibid., pp. 463-464.

³ This transcript is entered in a blank schedule Vocabulary of 180 Words, printed by the Smithsonian Institution for Gibbs, with a supplementary sheet; it is dated January 1, 1852; and while the published "Narrative" implies that it was recorded December 31, 1851, the manuscript date is confirmed by the Seri interpreter, Kolusio.

latter, when, on January 4, 1896, he was employed as an informant. He was then a fine-looking man of noble stature and figure, and of notably dignified air and manner, dressed in conventional attire; his hair was luxuriant, iron-gray in color, and trimmed in Mexican fashion. His looks indicated an age of about 70, but in his own opinion (which was corroborated by that of Señor Pascual Encinas and other old acquaintances) he was at least 75. His movements were vigorous, his eyes clear and bright, his vision good, and, except for hardly perceptible imperfection of hearing, he was in full possession of normal faculties. He was in the employ of the state as a trustworthy attaché of the governor's palacio, where his services were nominal; his real function was that of a Seri interpreter in case of need; and on the day specified he was temporarily assigned to the service of the expedition by His Excellency Governor Corral. By Mexican acquaintances he was commonly called Fernando, though he called himself Kolusio, sometimes using the former designation as a forename; he was also known as "El General" (= Chief), or "El General de los Seris". He had a vague memory of Tiburon island, which he left in childhood (at about 6 years of age, according to his estimate) and had never revisited, though he had been on the Seri border so late as 1870. Except when temporarily at Rancho San Francisco de Costa Rica, he had lived in Pueblo Seri, usually reporting in Hermosillo daily for such duty as might be assigned to him at the palacio. He was aware that he was regarded as a tribal outlaw, and admitted that no consideration could induce him to approach Seriland, since he would be slain by his tribesmen more eagerly than any alien; indeed, he hardly dared venture so far westward as Molino del Encinas, in the outskirts of Hermosillo, and only did so in daylight or in company of others. His few kinsfolk in Pueblo Seri had died or deserted so long before that he had forgotten names and dates; and, as he remarked with half-realized pathos, he had been alone amid aliens for very many years ("muy muchos años"). The linguistic inquiries put to him reminded him of previous interrogations of the sort, and he voluntarily described the visit of a distinguished American who, a long time ago (more than 40 years, he thought), came down from Ures, with many books and papers, and spent New Year's day in interrogating him about his language and his people. He was much impressed with the ability displayed by the "Gringo muy grande" in writing the terms and afterward repronouncing them properly; and he described the visitor as appearing very pale and sick ("muy palido y malo"), and under the necessity of frequently resting and taking medicine, and also as having wavy hair, worn so long as to hang down over the neck and shoulders. He could not recall that he had ever heard the American's name; but his description pointed clearly to Commissioner Bartlett, who had risen from a sick-bed at Ures and was on his way to Guaymas to get the benefit of a sea voyage, and who wore his hair long during a part or all of his expedition (as was subsequently

ascertained by extended inquiry). Kolusio also remembered "giving his language" (a bold if not sacrilegious act, according to his view) to two or three other persons, (one "not a Mexicano" though speaking Spanish, none "Americano"¹): but the first-mentioned instance was the one most deeply impressed on his mind. At this time (1896) he retained a working knowledge of the Seri tongue, and was able to serve satisfactorily as a Spanish-Seri interpreter; yet careful test showed that he had forgotten numerous native terms, and sometimes inadvertently substituted other Indian (Yaqui, Papago, and probably Opata) and Spanish words; while he knew so little of the tribal customs and beliefs that inquiries pertaining to them were too nearly fruitless to be long pursued. Undoubtedly his knowledge of the Seri tongue was fresher and fuller in 1852; but since he was practically isolated from his tribe in early childhood, he probably never possessed much information concerning the esoteric characters of his people.

The next noteworthy scientific student of the Seri was Johann Carl Eduard Buschmann, who visited various Mexican tribes, but whose knowledge of the Seri was wholly secondhand. Quoting Villa-Señor and Arrecivita and other early writers, noting unfortunate passages from Bartlett, and magnifying Mühlenpfordt's misapprehensions into positive error, he reduced knowledge of this and neighboring tribes to chaos. The "Guaymas" were separated from the "Seris (oder Seres)", and these (at least by implication) from the "Tiburones", while the "Piatos" were combined with the Seri, the traditional alliance with the Apache was greatly overdrawn, and the "Heri oder Heris" and the "Tepocas" were treated as distinct.² No new facts were adduced, no use was made of local sources of information, and no notice was taken of other than literary data.

In 1857 the gigantic surveying enterprise of Jecker & Co. was undertaken, under a concession from the Government of Mexico, and the scientific surveys were intrusted to a commission headed by El Capitán Carlos Stone (General Charles Pomeroy Stone, U.S.A.). The commission headquartered at Guaymas, purchased vessels for the survey of the coast, and began operations also in the interior; Bahia Pinacati and George island (named by Hardy in 1826) were surveyed, as well as the entire Sonoran coast south of Guaymas, and "one hundred miles of coast near Tiburon", besides many hundred square miles of valuable lands. At this stage friction developed between the progressive commission and the conservative Sonorenses, which ended in the expulsion of the scientific commission by the State government.³ By reason of the

¹ At the time of inquiry the importance of the other vocabularies was not suspected, and the interrogation was not pushed far enough to permit identification of the persons to whom they were given.

² Die Spuren der aztekischen Sprache im nördlichen Mexico und höheren amerikanischen Norden. Zugleich eine Musterung der Völker und Sprachen des nördlichen Mexicos und der Westseite Nordamerikas von Guadalajara an bis zum Eismeer. Von Joh. Carl Ed. Buschmann (in Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854, zweiter Supplement-Band); Berlin, 1859, pp. 218-221 and elsewhere.

³ Arizona and Sonora, etc., by Sylvester Mowry; New York, 1864 pp. 98-102.

premature termination of the work, few of the observations and other results were ever published. General Stone himself traveled extensively in Sonora, and delved deeply in the historical records of northern Mexico; and, while there is no indication that he ever came in personal contact with the Seri, he collected and sifted current local information relating to the tribe with notable acumen. In certain "Notes" prepared in Washington in December, 1860, he wrote:

The *Ceris* are a peculiar tribe of Indians occupying the island of Tiburon and the neighboring coast. They are yet in a perfectly savage state, and live solely by fishing and hunting. Having been at war with the whites from the time of the first missions, they have become reduced in numbers to about 300, counting some 80 warriors. They are of large stature, well made, and athletic. In war and in the chase they make use of poisoned arrows, the wounds from which are almost always fatal. In preparing the poison, it is said they procure the liver of a deer or cow, and by irritating rattlesnakes and scorpions with it, cause it to be struck by a great many of these reptiles. They then hang up the mass to putrefy in a bag, and in the drippings of this bag they soak their arrowheads. I can not vouch for the truth of this statement, but it is current in Sonora. I was informed by a gentleman in Hermosillo that one of his servants, who was slightly shot by a Ceri's arrow, died quickly from the effect of the wound (which mortified almost immediately) in spite of the best medical treatment. Their language is guttural, and very different from any other Indian idiom in Sonora. It is said that on one occasion some of these Indians passed by a shop in Guaymas, where some Welsh sailors were talking, and on hearing the Welsh language spoken, stopped, listened, and appeared much interested, declaring that those white men were their brothers, for they had a tongue like their own. They are very filthy in their habits, and are said to be worshipers of the moon.¹

Another Mexican traveler of note who collected local and contemporary information concerning the Seri, though enjoying no more than slight inimical contact with them, was Herr Clemens A. Pajeken, of Bremen (for some time a resident of California). He classed as wild Indians ("Wilde Indianer, Indios broncos") the Seri and Apache tribes. Of the former he wrote:

Ceris. This is a small tribe, their number not exceeding 400 souls, or rather head [dessen Seelenzahl oder besser Kopfzahl]; yet the government of the State could not restrain this little band of robbers and marauders that for more than twenty years have perpetrated their atrocities on travelers between the port of Guaymas and the city of Hermosillo, the metropolis of the State. . . . The Ceris appear not to grasp the idea that they are human. Like the prey-beasts of the wilderness, they go out to slay men and animals, sparing only their own kind. In many respects they are viler than the beasts, since they slay without need merely to satisfy a lust for slaughter. They are not only the stupidest and laziest of the Indians of Sonora, but also the most treacherous and deceitful. During the Spanish rule, from the time the first visit was made to lead them toward social life, they have rebelled more than forty times. Only a couple of families [ein paar Familien] still reside in the village [Pueblo Seri], where they make ollas and subsist on the offal of the shambles. The proper home of these barbarians is the island of Tiburon and the adjacent coasts, whither they return after their outbreaks, although it is an incredibly desert region. Thence they repair to the highways to kill travelers and arri-

¹ Notes on the State of Sonora, by Charles P. Stone, 1860; Washington, 1861, p. 19. Reprinted in Historical Magazine, vol. v, 1861, pp. 161-169.

eros, or to the ranges to steal cattle. They confine themselves to the bow and arrow, and the latter are poisoned, so that every wound made by them is deadly, or at best highly dangerous. On my second journey into the interior of the country my horse received an arrow in the hip; the arrow, which entered 4 inches, could not be withdrawn until the following day; and for seven months the wound suppurated. . . . Their chief food consists of oysters, mussels, snakes, with fish and other sea food, which they consume entirely raw and which surrounds them with an intolerable stench; though this may be partly due to their exceeding uncleanness, since the process of washing is wholly unknown to them. Their clothing consists of a kilt of pelican skin. They tattoo their faces, and some pierce their noses to insert a certain green stone [obsidian]. They are of dark copper color, large and strongly built. Although in their faces no human sentiments can be discerned, yet they can not be called ugly. Their limbs are so beautifully proportioned that the Spanish ladies in Hermosillo view with envy the slender shapes and the comely hands and feet of the young Ceris maidens. They wear no headdresses, and as their coarse, shaggy hair is neither combed nor cleaned, it sticks out in tangled tufts in all directions like spines on a hedgehog; this alone gives them a forbidding appearance. Their speech is quite like their character; it is guttural, discordant, and meager, resembling more the howling of wild animals than human speech, wherefore it is difficult for a human to learn. They have no religion—at least, I do not deem the gambols and amusing capers in which they indulge at the new moon to be religious customs. The tribe is constantly diminishing in numbers, and it is hoped they may soon disappear from the earth by natural decrease—unless the State government sooner undertakes a war of extermination.¹

Herr Pajeken's record bears inherent evidence (at least to one familiar with the region) of reflecting the current local knowledge and opinion concerning the Seri with unsurpassed—indeed unequaled—fidelity; and it is also of value in that it indicates the approximate number of the tribe then surviving in Pueblo Seri, and in that it gives the contemporary estimate of the tribal population.

Among the more careful students of the Seri at second hand should be mentioned Buckingham Smith, an enthusiastic collector, translator, and publisher of rare Americana. In the introduction to an anonymous and dateless grammar of the Heve language he wrote in 1861:

The lower Pima are in the west of the province [of Sonora], having many towns extending to the frontier of the indomitable Seri, who live some 30 leagues to the north of the mouth of the Hiaqui, and have their farthest limit inland some dozen leagues from the sea, finding shelter among the ridges and in the neighboring island of Tiburon.

He added in a note:

The Guaina speak nearly the same language as the Seri, are few in number, and live among the Hiaqui in Belen and elsewhere, having retreated before the sanguinary fury of their conquerors.²

While the scientific knowledge of the Seri began with Bartlett's visit, it assumed definite shape only through the classic researches of Don Francisco Pimentel (Count Herras) in the early sixties. His analysis and classification of the Seri tongue rest on a short vocabulary

¹ Reise-Erinnerungen und Abenteuer aus der neuen Welt in ethnographischen Bildern, von C. A. Pajeken; Bremen, 1861, pp. 97-99.

²A Grammatical Sketch of the Heve Language, translated from an unpublished Spanish manuscript; in *Library of American Linguistics*, vol. III, New York, 1861, p. 7.

collected by Señor D. A. Tenochio and transmitted to the Mexican Society of Geography and Statistics. Noting the condition of the tribe at the time, Señor Pimentel wrote:

The Seris are now reduced to a few families only, inhabiting Sonora, especially the island of Tiburon, for which reason they are also known sometimes by the name Tiburones. The Indians called Salineros, who live on the borders of Pimeria Alta, and the Tepocas, who live toward the south, belong to the Seri nation. The Seris have always been notable for their ferocity and barbarism, preferring death in war against the whites to the adoption of civilization. They are dreaded and notorious for their arrows, poisoned with a most virulent venom [emponzoñadas con activísimo veneno]. They are tall and well formed, and their women are good-looking. By reason of their distrust of the whites, it has not been possible to ascertain their traditions, further than that their ancestors came from distant lands of unknown direction. Of their religion it is known that they adore daily the rising sun.¹

After brief discussion of the grammar, and extended comparison of some sixty out of the seventy vocables selected by Señor Tenochio, he concluded:

Although in the list of Seri words consulted the foregoing reveal analogies with those of the Mexican group, there are, without doubt, other terms belonging exclusively to the Seri or some other branch extraneous to the Mexican group; for this reason it would appear that the idiom represents a distinct family.²

The list of these distinct words was appended. Referring to the dialects, Señor Pimentel expressed the opinion, based on literary references, that the "Guayma" or "Gayama", "Upanguaima", and "Cocomaques" may be considered as belonging to the Seri family.³

While Señor Pimentel gave credit to his informant, Señor Tenochio, he did not indicate the original source of the vocabulary; but the source may be defined approximately by a process of elimination: there is hardly a possibility that the terms were obtained from any tribesmen in Seriland, since they were all inimical to the whites, and since very few of them have ever known enough of the Spanish tongue to permit communication with the Mexicans; accordingly, it is practically certain that the Seri interpreter must have been either (1) a resident of Pueblo Seri or (2) an attaché of rancho San Francisco de Costa Rica (of which more anon); and in either case it would seem certain that the native informant could have been none other than the standard Seri-Spanish interpreter of the last half century—Kolusio. Indeed, Kolusio was, at the time, the only Seri habitué of Pueblo Seri possessing sufficient knowledge of the Spanish and enough intelligence and independence to "give his language", and was one of the two frequenters of the rancho similarly equipped.

Pimentel's contemporary, Licenciado Manuel Orozco y Berra, contributed in important measure to systematic knowledge of the Seri, which

¹ Cuadro Descriptivo y Comparativo de las Lenguas Indígenas de México, ó Tratado de Filología Mexicana, por Francisco Pimentel, segunda edicion unica completa, tomo II; Mexico, 1875, p. 229. The first edition of the work was published in two volumes, dated, respectively, 1862 and 1865.

² Ibid., p. 241.

³ Ibid., p. 234.

he defined (apparently on the basis of the Tenochio vocabulary systemized and published by Pimentel) as a distinct linguistic family with two dialectic branches,¹ viz:

IX FAMILIA.—SÉRI.

XXXIII. *Séri*, por los séris, céris, tiburones, tepocas, salineros, en Sonora.

61. I. *Upanguaima*, por los upanguaimas, en Sonora.

62. II. *Guaima*, por los guaimas, guaymas, gayamas, cocomaques, en Sonora.

Orozco's map assigns to the Seri family an immense area (recalling Villa-Señor's "despoblado") extending from just above the mouth of the Yaqui, northward to the thirtieth parallel on the coast, stretching inland nearly to Cucurpe, Opodepe, and Ures, and including Tiburon; the "Salineros" lying adjacent to the coast in the north, the "Tepocas" medially, and the "Guaymas" in the south, within this area. In elucidating the map he wrote, under the title "El séri.—El upanguaima.—El guaima":

The Séris, a tribe inhabiting Sonora, forms, with its subtribes, a separate family. By their language, by their customs, and by their physiognomy, they are completely set apart from affiliation with the surrounding nations; and apparently they have lived in the district which they now occupy from times anterior to the establishment of the Pima race and its affines; their use of poisoned arrows recalls the Caribs of the islands, as well as of the continent, and it seems not unlikely, although very curious, that they are related to them. The Séris, known also as Tiburones, a name derived from the island of Tiburon in the Mar de Cortés, which serves them as a shelter, considered as parts of their tribe the Tepocas and the Salineros.

The "Upanguaima" (a very small tribe occupying the Seri border) and the "Guaimas", as well as the "Cocomagues" were combined chiefly on the authority of Jesuit writers.² In describing the State of Sonora he further wrote:

The Séris, bounded by the sea on the west, the Pimas Altos on the north, the Opatas and the Pimas Bajos on the east, and the pueblos of Rio Yaqui on the south, form the smallest nation of Sonora, but at the same time the most cruel and deceitful and the least capable of reduction to political organization. Hardly uniting with the smaller pueblos as at Populo and Belen, the rest of the nation engaged so constantly in cruel warfare that it was necessary to persecute and exterminate them. . . . Small as was the tribe, three divisions are known: the Salineros, extending to the confines of Pimeria Alta; south of them the Tepocas, nearest to the island of Tiburon; the Guaymas and Upanguaymas occupying the territory adjacent to the harbor of the same name, afterward added to the pueblo at Belen and blended with the Indians of Rio Yaqui. Ferocious and savage, they preferred to die in war against the whites rather than adopt their usages and customs; lazy and indolent, they so surrendered themselves to the passion of intoxication that mothers conveyed aguardiente from their mouths to the smallest babes. They are tall and well formed, the women not lacking in beauty. The poison with which they envenom their arrows is proverbial for deadly effect; they compound the venomous juice from a multitude of ingredients and fortify the compound by superstitious practices.³

¹ Geografía de las Lenguas y Carta Etnográfica de México, Precedidas de un Ensayo de Clasificación de las Mismas Lenguas y de Apuntes para las Inmigraciones de las Tribus, por el Lic. Manuel Orozco y Berra; Mexico, 1864, p. 59.

² Ibid., p. 42.

³ Ibid., pp. 353-354.

The classifications by Pimentel and Orozco were widely accepted, and were given still wider currency by republication in standard works, such as the classic dictionary of the Nahuatl tongue by Rémi Siméon, in which is defined "*La famille Seri, dans la Sonora, avec 3 idiomes: le Seri, le Guaima et l'Upanguaima.*"¹ In his ethnographic tableau of the nations and languages of Mexico, M. V. A. Malte-Brun followed Orozco almost literally, save that he emphasized the suggested Caribbean affiliation of the Seri, saying:

They make use of poisoned arrows, and when one studies their manners, their habits, their modes of life, one is tempted to find in them a strong affinity [*grande affinité*] with the Caribs of the continent and the islands.²

During the seventies Hubert Howe Bancroft was engaged in collecting material for his monumental series of works, and in arranging the ethnologic data for publication. Of the Seri he wrote:

East of the Opata and Pima bajo, on the shores of the Gulf of California; and thence for some distance inland, and also on the island of Tiburon, the Ceri language with its dialects, the Guaymi and Tepoca, is spoken. Few of the words are known, and the excuse given by travelers for not taking vocabularies is, that it was too difficult to catch the sound. It is represented as extremely harsh and guttural in its pronunciation and well suited to the people who speak it, who are described as wild and fierce. It is, so far as known, not related to any of the Mexican linguistic families.³

The only vocabulary of this language which Bancroft was able to find was added (without reference to the aboriginal source); it comprised the eleven words collected by Lavandera and discussed by Ramirez in 1850.⁴

The Seri, with their affines, the Tepoka, Salinero, Guayma, and Upanguayma, were included by Bancroft in his arbitrarily defined "Northern Mexican family".⁵ The accompanying map (which is highly inaccurate) located the "Salineros" on the gulf coast, considerably north of the common embouchure of "R. de Horcasitas" and "Rio de Sonora", while the "Seris" were more conspicuously represented about the broad estuary into which the rivers embouch, and the "Tepocas" were located still farther southward on both Tiburon and the mainland, the island being placed too far southward and the river much too far northward.⁶ Numerous data relating to the Seri were incorporated in his text; all were second-hand, though many were taken from unique or rare manuscripts. The coastwise natives of Sonora were said to "live on pulverized rush and straw, with fish caught at sea or in artificial enclosures"; mention was made of the allegation that "the Sali-

¹Dictionnaire de la Langue Nahuatl ou Mexicaine, rédigé d'après les Documents imprimés et Manuscrits les plus authentiques et précédé d'une Introduction; Paris, 1885, p. xviii.

²Tableau de la Distribution ethnographiques des Nations et des Langues au Mexique; Congrès International des Américanistes, Compte-rendu de la Seconde Session, tome II, 1878, p. 37.

³The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1882, p. 704). The "east" in this quotation is obviously a misprint for west.

⁴Ibid., p. 705.

⁵Op. cit., vol. I, pp. 604-605.

⁶Ibid., p. 471.

neros sometimes eat their own excrement"; anthropophagy was noted, but as pertaining rather to the interior than to the coastwise tribes;¹ and prominence was given to the Seri arrow poison, of which an early author wrote:

The poison with which they envenom the points of their arrows is the most active that has ever been known here. . . . It has not been possible to ascertain with certainty the deadly materials of which this pestilential compound is brewed. Many things are alleged, e. g., that it is made from the heads of vipers, irritated and decapitated at the moment of striking their teeth into a piece of lung or of half putrefied human flesh.

Reference was made also to the "magot" (probably the yerba mala of the modern Mexicans) as a source of arrow poison.² The girls' puberty feast was said to be kept up for several days among the Seri and Tepoka, and the former were said to "superstitiously celebrate the new moon, and bow reverentially to the rising and setting sun", and also to "employ charms in their medical practice".³ Finally, the constituent tribes were discriminated in a manner recalling the persistent assumption that the parasite-converts at the missions fairly represented the Seri:

The Tepocas and Tiburones are fierce, cruel, and treacherous, more warlike and courageous than the Ceris of the mainland, who are singularly devoid of good qualities, being sullenly stupid, lazy, inconstant, revengeful, depredating, and much given to intemperance. Their country even has become a refuge for evil doers. In former times they were warlike and brave, but even this quality they have lost, and have become as cowardly as they are cruel.⁴

It is evident that this characterization of "the Ceris of the mainland" was based on the degraded scavengers outlawed by the tribe and attached to the missions and pueblos during much of the historical period.

It was also during the seventies that the errors and uncertainties of three and a half centuries concerning the coasts of the Californian gulf were finally brought to an end through the surveys of Commander (now Admiral) George Dewey, U. S. N., and the officers of the United States ship *Narragansett*, under the direction of the Hydrographic Office of the United States. These surveys resulted in trustworthy and complete geodetic location of all coastwise features, in geographic placement of the entire coast-line, in soundings of such extent as to determine the bottom configuration, in tidal determinations, in recognition of the currents, in definition of harbors and anchorages, and eventually in a series of elegant and accurate charts (dated 1873-75) available for the cartographers and navigators of the world. As the largest island in the gulf, Tiburon received especial attention; its coast was accurately surveyed and mapped, while the interior was sketched in considerable detail, and the adjacent channels were carefully defined and sounded.

¹The Works of Hubert Howe Bancroft, vol. III (The Native Races, vol. III, 1882, p. 576.)

²Ibid., p. 579.

³Ibid., pp. 584, 587, 589.

⁴Ibid., p. 590.

Naturally the surveyors came into contact with the Seri tribesmen. Of them Commander Dewey wrote:

During the greater part of the year Tiburon Island is resorted to by the Seris (or Ceres) tribe of Indians, who inhabit the adjacent mainland, and their huts and encampments may be seen in many places along the shore, principally on the eastern side of the island. They are reputed to be exceedingly hostile and to use poisoned arrows in opposing the landing of strangers on what they consider their domain, but during the stay of the *Narragansett* in the vicinity they were very friendly. At first they were shy and made threatening gestures, but soon finding that our intentions were peaceable, became friendly and returned our visits to the shore by frequent and lengthy calls on board ship. They are very expert in hunting with the bow and arrow and in catching fish and turtles, which abound in the surrounding waters. The canoes of these Indians deserve especial mention. They are made of long reeds, which are bound together with strings after the manner of fascines, three of which when fastened together . . . have sufficient buoyancy to support one or two persons. They kneel in these canoes when paddling, the water being at the same level in the canoe as outside of it.¹

Illustrations of the "Tiburon canoe" (or balsa), drawn by H. Von Bayer, were also introduced.² In addition Mr Von Bayer succeeded in obtaining two photographs of Seri Indians, taken on shipboard; one of these is of special interest in that it illustrates the peculiar attitude of the Seri archer in the act of using his weapon.³

Unfortunately the surveys were confined to the coast, and the interior remained unmeasured and unmapped save on the basis of tradition and travelers' tales, supplemented by a few vague itineraries and traverses. Except along the international boundary and the railway (Ferrocarril de Sonora), the locations of pueblos and ranchos remained guesses, the delineation of mountains remained a work of imagination, and even the best cartographers continued to run in rivers at random or in such wise as to afford artistic effect.⁴

In 1879 M Alphonse L. Pinart traveled extensively in northern Mexico and southwestern United States, and made considerable linguistic collections among various tribes. Desiring to obtain a Seri vocabulary, he planned a visit to the tribal territory; but on reaching Caborca in March he was met by the information that the Seri were on the warpath, and had recently devastated a hacienda on their frontier and slain more than a dozen white settlers.⁵ Thence he repaired

¹Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation. The West Coast of Mexico, from the Boundary Line between the United States and Mexico to Cape Corrientes, including the Gulf of California (revised edition), 1880, p. 145.

²Ibid., pl. xv, p. 136 (one of these illustrations is reproduced in figure 28).

³The negatives of these pictures were retained by Mr Von Bayer, and have been kindly turned over to the Bureau of American Ethnology. Unfortunately the archery negative had been shattered, but enough of the fragments were preserved to show all essential details and to afford a basis for the drawing reproduced in plate XXIX.

⁴The imposing official map of 1890, titled *Carta General de la Republica Mexicana, formada en el Ministerio de Fomento con los datos mas recientes, por disposicion del Secretario del Ramo*, General Carlos Pacheco, engraved and printed by Erhard Hermanos, Paris, on a scale of about 32 miles to the inch, represents Rio Bacuache as about the right length and with its center in about the right location, but as running at almost exactly right angles to its actual course; and it contains divers other equally startling errors.

⁵Recorded by Gatschet, *Zeitschrift für Ethnologie*, Berlin, Band xv, 1883, p. 130. The location of the hacienda was not specified, but there are local traditions of Seri raids about that time, both at Hacienda Serna (between Caborca and Libertad anchorage) and at Bacuachito.

to Pueblo Seri, and early in April obtained there a Seri-Spanish vocabulary of several hundred words, with a number of short phrases throwing some light on the grammatic construction. This record was transmitted to Dr Albert S. Gatschet. It comprises a title page inscribed "Vocabulario de la lengua Séri | Interprete el Gl. de los Seris | y otro Indio. | Pueblo de Seris | 4 Abril 1879"; four foolscap sheets (written on both sides, thus making 16 pages) of vocabulary; and a final page bearing two short phrases and inscribed "Los Séris, me dice el general de ellos, son como doscientos hombres de llevar armas—viven todavia parte en la isla de Tiburon, parte en la costa.¹ Pueblo de Seris, 4 Abril, 1879, Alph. Pinart." A transcript of this invaluable vocabulary is preserved in the Bureau of American Ethnology. There is nothing either in the original vocabulary or in the known correspondence relating to it to identify the aboriginal informant, but the identification is made easy through the coincident testimony of living witnesses and the unmistakable implication of the historical records to the effect that there was at that time but a single Seri Indian² resident at Pueblo Seri—i. e., the official interpreter, "El General" Kolusio. This identification is strengthened by the remarkable similarity between this vocabulary and that of Bartlett, a similarity made the more striking by the fact that one was recorded in English, the other in Spanish; the identification is supported, too, by Kolusio's memory of "giving his language" to a stranger "not a Mexicano" yet familiar with the Spanish; and the identification is practically established by the considerable number of terms expressing concepts alien to the Seri (e. g., ax, adobe, house, horse, hog, field, irrigate, pigeon, thresh, tobacco, shirt, the names of the months, etc), evidently acquired through long and intimate acquaintance with Mexican customs and domiciles and modes of thought—for all these concepts were familiar enough to Kolusio, yet to no other known Seri Indian of recent decades. Accordingly it may be deemed practically certain that M Pinart's vocabulary, like that of Commissioner Bartlett, was obtained from Kolusio; and it is at least strongly probable that both the Lavandera-Ramirez and the Tenochio-Pimentel vocabularies were derived from the same aboriginal source—an indubitably excellent source, save for the occasional interjection of alien notions, and the infrequent substitution of foreign equivalents for forgotten terms.

Barred from Seriland by the current war craze, M Pinart was prevented from obtaining much collateral information concerning the Seri; but he concluded (on grounds not stated) that "the Tepoca spoken on

¹ "The Seris, the chief tells me, comprise about 200 men fit to bear arms—they still live part on the island of Tiburon, part on the coast."

² M Pinart's reference to his interpreter is not only impersonal but ambiguous. "Interpreted by the chief of the Seri and another Indian" might be considered to imply *two* Seri Indians, though it may, with equal linguistic probability, be interpreted to mean *the* specified Seri and another Indian; and while the temporary presence of a second Seri at the pueblo seems possible, the sum of probabilities points so clearly the other way as to demand the latter interpretation.

the south of Rio del Altar is identical with the Seri",¹ and also that "the Guaymas were of the stock of the southern Pimas, or Nebomes".²

While M Pinart failed to publish, his linguistic collections were compared, systemized, and made public by Dr Albert S. Gatschet in a notable memoir on "Der Yuma-Sprachstamm", 1883. Comparing the Seri, as represented by the Pinart and Bartlett and Pimentel vocabularies, with the Yavapai, M'Mat, and incidentally with the Konino, Tonto, Cochimi, and other tongues, Dr Gatschet was led to adopt the suggestion of Professor Wilhelm Herzog³ that the Seri is a dialect of the Yuman stock. In the comparative vocabulary, which comprises about a hundred and forty Seri words (selected from the 611 terms in the Pinart collection), there are perhaps a dozen terms presenting some similarity to those of one or more Yuman dialects; among these are terms for ax, tree, split, tobacco, heaven, pigeon, dog, and others of presumptively or certainly alien character.⁴

Herzog's suggested classification, with Gatschet's indorsement, was accepted even more promptly and widely than the earlier classifications of Pimentel and Orozco. It was tacitly adopted by Director J. W. Powell in his classic arrangement of Indian linguistic families of America north of Mexico;⁵ it was explicitly approved by Adolph F. Bandelier in his "Final Report of Investigations";⁶ and it was implicitly accepted and fortified by Dr Daniel G. Brinton in his work on "The American Race".⁷ Brinton's Seri words were "chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett"; of the 21 terms, about 8 (including that for the alien concept "house") suggest affinity with the Yuman, chiefly in the Mohave dialect; the others are either wholly distinct or only superficially similar, e. g., in the concurrence of a consonant or two, or merely in the correspondence in number of syllables.⁸

Stated briefly, the scientific researches relating to Seriland and the Seri during the fifty years from the fourth decade of the century to the middle of the last decade resulted in (1) a satisfactory survey of the coast, (2) the collection of two excellent Seri vocabularies, with a few others of less extent, and (3) two discrepant linguistic classifications of the tribe, both widely quoted and accepted.

¹Gatschet, op. cit., p. 131.

²Bandelier, Final Report of Investigations among the Indians of the Southwestern United States, part I, in Papers of the Archaeological Institute of America, American series, III, Cambridge, 1890, p. 76. As already noted, it is probable that the Guayma lost their "antigua idioma" (Ramirez, op. cit. p. 149) long before M Pinart's visit; and pending definite statement of the facts on which his conclusion rests it is necessary to retain the classification based on specific and repeated, albeit unskilled, observations of the identity of the Guayma speech with that of the Seri.

³In correspondence with Dr Gatschet, op. cit., p. 133.

⁴Dr. Gatschet has recently revised the data and recognized the distinctness of the Seri tongue (Science, new series, vol. XII, 1900, p. 556-558).

⁵Seventh Annual Report of the Bureau of Ethnology, 1885-'86; Washington, 1891, p. 137.

⁶Op. cit., p. 74.

⁷The American Race: A Linguistic Classification and Ethnographic Description of the Native Tribes of North and South America; New York, 1891, p. 335.

⁸Mr. Hewitt's discussion (postea, pp. 299-344) gives fuller details of this short vocabulary.

During the half century of historical silence from 1844 forward, and pending the progress of the desultory researches, the Seri suffered a succession of external shocks more serious in their internal effects than any of those of the three centuries preceding; indeed it is just to say that during this half century the Seri range was curtailed, the Seri customs were modified, and the Seri population was diminished more effectively than during the preceding sesquicentury of fairly definite record. The chief factor in this transformation was an intrepid pioneer, who pushed actual settlement toward the Seri frontier more vigorously than any predecessor—Señor Pascual Encinas, a son of Sonora.¹

Born near Hermosillo in 1819, Don Pascual was in early maturity at the time of Colonel Andrade's expedition, and was fully conversant with the later history of the Seri. Of adventurous disposition, and holding interests in Bacuachito, he was familiar with the Seri frontier; and in hunting deer and other large game over the vast delta plain of Rio Sonora he had perceived the agricultural possibilities of the region. During the struggle of 1844 he became impressed with the idea that the Seri might be controlled and gradually inducted into useful citizenship through a judicious combination of industrial, educational, and evangelical agencies; and before the end of the year he began the establishment of a rancho (the present Rancho San Francisco de Costa Rica) on the Seri borderland, with the double object of developing new resources and regulating the relations between tribesmen and settlers. Enlisting the aid of a corps of vaqueros, mechanics, and farmers, he excavated a deep well, erected corrals and adobe houses, cleared away the exceptionally luxuriant mesquite forests, fenced fields, and stocked the plains with horses, burros, and cattle. At the same time he sought Seri wanderers and treated them with such kindness and firmness as to gain their confidence; and while most of the tribe held aloof, some attached themselves to the rancho, and a few even were taught to labor, albeit in desultory fashion. In this stage, as for some years afterward, he was materially aided by his contemporary, Kolusio, then in his physical prime and still in good repute among his kinsmen. Meantime he obtained the assignment of two priests, who made it their chief duty still further to placate the tribesmen and their families and to induct them into religious observances and belief; and as the confidence of the Indians increased, he had two boys domiciled in the rancho and educated in the Spanish as well as in the faith, in the hope that they might pass into priesthood and so form a future bond with their kin. One of these neophytes disappeared in the troublous times of a later decade, though tradition indicates that he became a tribal outcast (like Kolusio still later) and slunk away to Pitiquito and Altar, and afterward to California; the other, christened Juan Estorga and

¹ The following paragraphs are condensed from oral recitals by Señor Encinas (a notably straightforward and judicious authority), supplemented and corroborated in all essential details by Señores Andres Noriega, Ygnacio Lozania, and several other habitués of the Seri borderland, as well as by Kolusio and Mashém, several Papago informants, and various collateral documents.

nicknamed El Gran Pelado ("The Great Shorn"), survives as subchief Mashem, long since relapsed into his native savagery, save that he remembers the Spanish, affects a hat, cuts his hair to the neck (whence his nickname), and prefers footgear to the fashion of his fellows.

Industrially, Don Pascual's venture proved successful; the fertile soil, periodically watered from below by the underflow of the semi-annual freshets, yielded incredible crops; reveling in the exceptional floral wealth of the delta and tided over bad seasons by the artificial forage, the stock increased and multiplied beyond precedent; and so the rancho became a flourishing establishment, housing a score or more of families and harboring a hundred or two dependents, in addition to the thousands of half-wild horses and cattle. Meantime, the industrial lines ramifying from the rancho formed a drag net for Seri raiders, practically cutting off forays eastward toward Hermosillo and Horcasitas, and greatly reducing the sallies southeastward toward Guaymas and northeastward toward Bacuachito and Caborca; and Don Pascual began to receive recognition and state and federal concessions as a public benefactor. For a decade the industrial and evangelical influence and the effect of the bold kindness of El Patron extended and became felt throughout the tribe, and most of the families visited the rancho at least occasionally. Yet even the best of them remained averse to labor save in sporadic spurts, and indifferent to the religious teaching, save when sweetened by substantial largess; while all but the decrepit and the two carefully restrained neophytes came and went capriciously, and were much given to decamping incontinently by night to return shamefacedly one by one in the course of a week or two, without consistent or adequate excuse for their stampede—indeed the vaqueros habitually classed these nocturnal flights of the Seri and the reasonless stampedes of their stock in the same category. Ostensibly a few of the larger boys and girls and a still smaller number of the adults were helpers about the rancho; actually they were scavengers, consuming the waste of the shambles and the earth-mixed scatterings from the thrashing floors, and saving the rancheros the noisome duty of removing the carcasses of animals dead by disease or accident; and as their indolence increased under the easy régime, they grew into more and more open thievery. By no means deficient in shrewdness and cunning, they adopted numberless devices for imposing on the credulity of the majordomo and other officials of the rancho. When coin-like tokens of stamped copper were used in the transactions of the rancho as equivalents of labor, the Seri ingeniously obtained sheet copper by stealth or barter, systematically counterfeited the tokens, and exchanged them for supplies at the rancho store; it was a favorite trick to surreptitiously break the neck or a leg of a horse, cow, or burro, and report finding the dead or crippled animal, at the same time begging for the carcass; and, whenever opportunity offered, they slyly slaughtered a head of stock, consumed it to the hoofs and horns



HOUSE FRAMEWORK, TIBURON ISLAND



HOUSE COVERING, TIBURON ISLAND

and larger bones, sucked up the blood stains, and buried the few remains in cactus thickets, impenetrable save by their own hardy limbs and bodies. Nor did any of the tribe except the two restrained neophytes ever really enter the collective life of the patriarchal group headed by Don Pascual; they attended no industrial or social or churchly function save in response to reminder and solicitation; they craved the white man's medicines in slight disorders, but rejected them in extremis; and the dying or dead were spirited away to be inhumed and mourned, according to their wont, in their harsh but beloved motherland.

During this period of mutual toleration the Seri were so deeply influenced by the white contact that, for probably the only time in their history, they voluntarily allowed an alien free entry into their territory; and Don Pascual explored the coast of Bahia Kino, projected a port, and even visited Isla Tiburon twice or thrice. In one of these visits he was ferried over Boca Infierno on a balsa, but, finding himself unable to keep pace with the swift-footed Seri on their hilly pathways, he returned for his saddle mule; halfway across, the poor animal swimming behind the balsa suddenly plunged and struggled, and, on landing, hobbled out on three legs—the fourth having being snapped by a shark. Warned by this incident, Don Pascual abandoned a half-formed plan of stocking the island, and afterward brought up a small vessel from Guaymas in which he carried across a dozen caballeros (including Don Ygnacio Lozania, who had visited the island with the Andrade expedition); and this party examined the southeastern quarter of the island, watering two or three times at Tinaja Anita, and pushing as far westward as Arroyo Carrizal. On this trip he studied the Seri house-building, and was the first to note the large use of turtle-shells and sponges in the process.¹

About the middle fifties it became apparent that the Seri were dividing into a parasitical portion clustered about the rancho (as their forbears gathered about Populo and Pueblo Seri long before), and a more independent faction clinging to their rugged ranges and gale-swept fishing grounds; and it became evident, too, that the thievery of the dependent faction would soon ruin the rancho if not checked, or at least greatly diminished. Accordingly the passive policy was modified by introducing a more active police service. At first the penalties for theft and misdemeanors were light, and the system promised well—especially as even a slight punishment was equivalent to banishment, the criminal fleeing to Tiburon on his escape or immediately after the crime; yet the experience of a year or two proved that the escaped parasites seldom resumed the hard customs of their tribal life, but generally returned to the borderland and there preyed on the wandering stock from the rancho. Finally, driven to extremity, and supported

¹Typical Seri jacales, as described by Don Pascual in 1894, were observed on Tiburon by the 1895 expedition, as shown by the photographs reproduced in plates VII, VIII, and IX.

by the state and federal authorities (themselves confessedly unable successfully to cope with the condition), Don Pascual reluctantly adopted a severer régime. Sending out as messengers several Seri still remaining at the rancho, he convened the leading chiefs and clanmothers of the tribe in a council, and announced that the stock-killing must cease, on pain of a Seri head for each head of stock thereafter slain. The Indians seemingly acquiesced, and separated; but within two days a group of Seri women "milled" a band of horses, caught and threw one in such wise as to break its neck, and immediately sucked its blood, gorged its intestines, and buried its quarters to "ripen", after their former fashion. Thereupon a matron remaining near the rancho was sent to demand the delivery of the perpetrators; and, when she failed to return, the vaqueros were instructed to shoot the first Seri seen on the llano. Within two days more, the tribe were on the warpath for revenge—and the war raged for a decade.

During the early months of the Encinas war Don Pascual's vaqueros sought merely to enforce the barbaric law of a head for a head; but, as they found themselves beset by ambush, assailed and wounded by night, despoiled of favorite animals, and kept constantly in that most nerve-trying state of eternal vigilance, their rancor rose to an intensity nearly equal to the savage passion for blood-vengeance; and thenceforth the Seri were hunted from the plain east of Desierto Encinas precisely as were the stealthy jaguar and sneaking coyote—and the ghastly details were better spared. There were few open battles; commonly the vaqueros rode in groups and guarded against ambuscades, and the Seri were picked off one by one; but once in the early sixties Don Pascual, at the head of some 30 vaqueros, fell into an ambush on the frontier, and several of his horses were killed and some of his men wounded, while 60 or 70 Seri warriors were left on the field. Don Pascual's horse received a slight arrow wound, to which little attention was paid; next morning the gash was swollen and inflamed and the beast too stiff and logy for use; in the afternoon the glands under the jaw were swollen, and there was a purulent discharge from eyes and nostrils. On the second morning the animal was hardly able to move, its head was enormously swollen, there were fetid ulcers about the jaws and throat, and the swelling extended to the legs and abdomen. On the third morning there were suppurating ulcers on various parts of the body, while rags of putrefied flesh and stringy pus hung from the head and neck, and the animal was unapproachable because of the stench; during the day it dropped dead, and even the coyotes and buzzards shrank from the pestilential carcass. This and parallel incidents impressed Don Pascual with the dangers incident to Seri war; but fortunately the fact that he—the leader of the party, the first to fall into the ambush, and the target of most of the arrows—had escaped unscathed impressed still more deeply the surviving savages, and they soon sued for peace. Thenceforth he was revered as a shaman greater than those of the tribe, feared as an invulnerable fighter, and honored as a just lawgiver; and



SPONGE USED FOR HOUSE COVERING, TIBURON ISLAND

gradually the condition of mutual tolerance was restored, to rest on a firmer basis than before.

Don Pascual estimates that during the dozen years of strife between his men and the Seri forces about half of the tribe were slain. The horror of the history of this period may be passed over; it may merely be noted as a casual fact that one of the two Mexicans accompanying the 1895 expedition was credited with 17 Seri heads. When he pointed out the site of his last exploit, a mile or two south of Rancho Libertad, and some incredulity was expressed, he immediately galloped to the spot and brought back a silent witness in the form of a bleached Seri skull.¹

At the close of the war Don Pascual continued the industrial development of the plains lying east of the desert border of Seriland, received new concessions in recognition of his conquest, and developed the ranchos of Santa Ana and Libertad; but the evangelical arm of his vigorous mission gradually withered. For a dozen years the Seri looked up to "El Patron" as a quasi ruler, whose approval was requisite for the ratification of chieftainship, and through him ran a slender thread of nominal fealty to the state and the republic; yet few parasites gathered about the rancho. Mashém had gone back to his clan; and when depredations were committed at Bacuachito or elsewhere and the criminals were caught, usually through Don Pascual's instrumentality, they were sometimes haled to Hermosillo for trial, and Kolusio was kept there as the official interpreter of charges and evidence and findings. Sometime during the sixties a few Seri youths were coaxed to Pueblo Seri for education, but when they were instructed to cut their hair they slunk dejectedly to their temporary domicile, only to decamp during the ensuing night; again, in 1870, Kolusio was commissioned to bring in a few young people and a matron or two of the tribe, and succeeded in doing so just in time to encounter an epidemic of measles, from which some died, while the others shook the dust of the pueblo from their feet forever; and this last straw, added to his alien residence and his presence at the dreaded trials, broke down the tribal toleration of Kolusio and made him an outlaw forever.

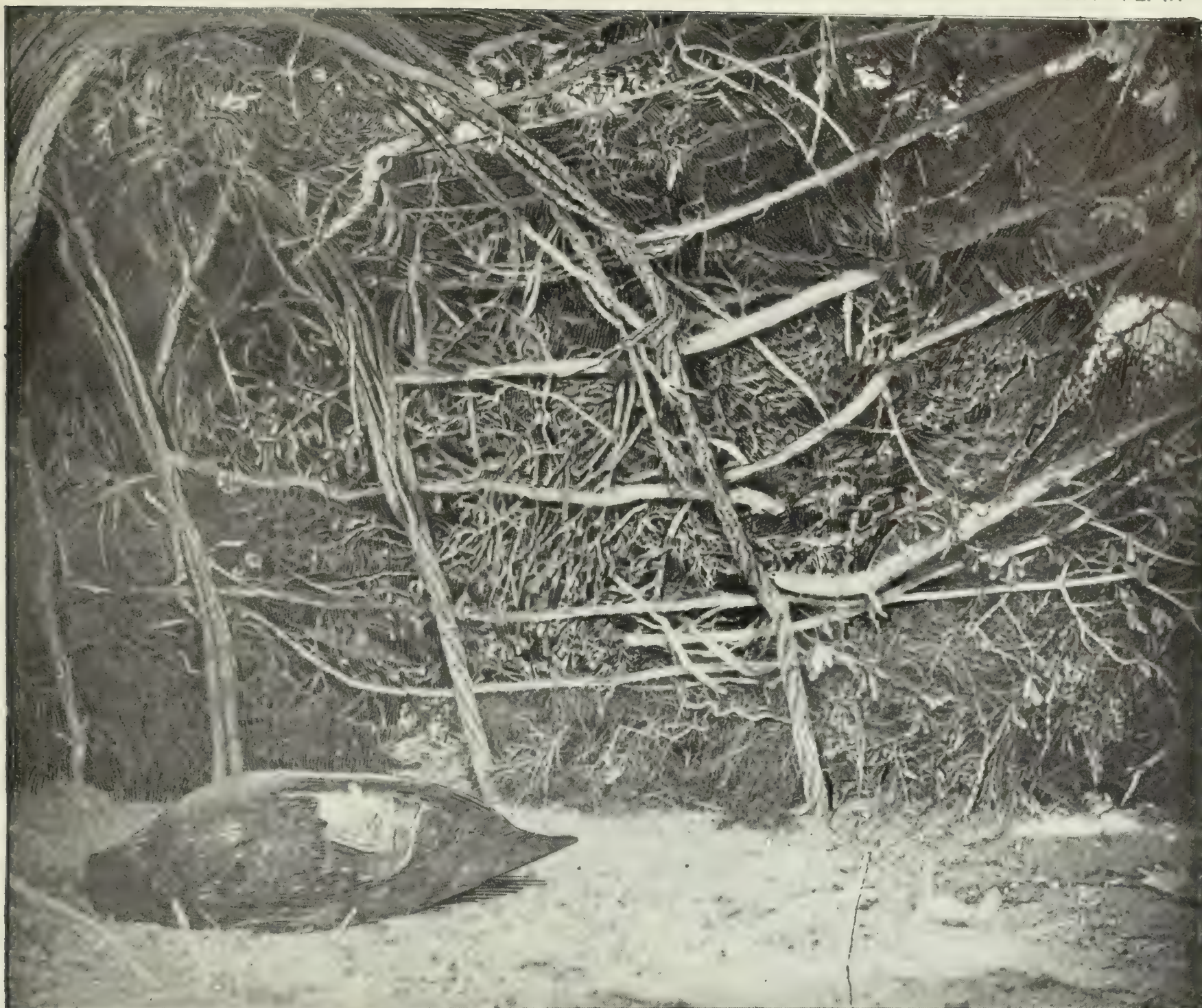
In the later seventies Don Pascual's energies began to wane, while the Seri population was waxing again; and, although the Encinas frontier was protected, raids began to recur toward Bacuachito, on the ranchos southwest of Caborca, and sometimes toward Guaymas; and the hostilities then engendered have never terminated. In the eighties Don Pascual suffered from cataract, gradually losing his sight, and his rule relaxed still further; Rancho Libertad was abandoned, and a condition of armed neutrality supervened at San Francisco de Costa Rica and Santa Ana; and this condition still persists, save as occasionally modified by a crude sort of diplomacy on the part of the Seri: when blood-feud is not burning (and it is usually extinguished by the killing of an alien on the coast or some remote part of the frontier), and when no stock have

¹ The specimen described by Dr Hrdlička, *postea*, p. 141.

been slaughtered for some months, an aged woman may be seen skulking about the mesquite clumps in sight of the rancho; if her presence is tolerated for a day or two, she approaches to beg for water and food and to receive the cast-off rags hastily forced on her nakedness by the sensitive señoras; if she deem her welcome not too chill, she erects a jacal a few hundred yards away, and there she is usually found, a morning or two later, to be accompanied by a younger matron with a child or two; and if these are tolerated, the rancheria may grow to half a dozen jacales and half a hundred persons.¹ The band may remain a fortnight or even a month; but in case of serious illness of any of their number, or of threat or punishment for petty peccadillos, or of an unusual storm, or of a brilliant meteor, or of any exceptional occurrence about the rancho, the rancheria is commonly found empty next morning. If the attachés of the rancho are indisposed to tolerate the first envoy, yet feel kindly rather than rancorous, she is merely dogged and stoned away like a depredating domestic animal from another hacienda; if the rancor of past encounters remains, the mercy accorded her is precisely that shown the predatory coyote or other feral animal from the fastnesses of the sierras—and the tribe take warning and doubtless rejoice that their loss is no greater.

Any recital of the common history of the peculiarly savage Seri and the whites necessarily conveys an exaggerated notion of intimacy and mutual influence, since it emphasizes the few positive interrelations scattered along the decades of neglected nonrelation; and this is true of the Encinas régime as of earlier centuries. The great fact is that throughout their recorded history the Seri have touched civilization so slightly and so seldom that the effect of each contact was largely lost before the next supervened; and the unprecedentedly intimate contact of the Encinas régime, especially during the initial period of abnormal toleration, serves less to indicate relationship in characteristics and sympathies than to measure the breadth of the chasm between the Seri and the Mexican—a chasm not exceeded, and probably not equaled, elsewhere in America. About the middle fifties, probably every Seri above infancy and below decrepitude had seen Don Pascual and some other habitués of the rancho; they yielded to the seductions of indolent scavengering apparently more numerous than ever before; they substituted cast-off rags and barter-bought manta (plain cotton cloth) for the products of their own primitive weaving; they ate cooked food when it fell in their way; they half-heartedly adopted metal cutting implements, and sought or stole nails and hoop-iron for arrowpoints; some of them acquired a smattering of Spanish, and many of them solicited and sported Spanish names, just as they begged and flaunted tawdry handkerchiefs and beads; and they generally enjoyed mildly the ecclesiastical fiestas, and took kindly to the cross as a symbol of peace and plenty and perhaps of deeper import. Yet

¹ A typical single jacal and the entire rancheria gathered at Costa Rica in 1894 are shown from photographs in plates x and xi.



HOUSE SKELETON, TIBURON ISLAND



INTERIOR HOUSE STRUCTURE, TIBURON ISLAND

even during this halcyon term no Seri save Kolusio and the Altar outlaw ever learned to live in a house; none but these and Mashém wore hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Serna, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas¹ on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Cieneguilla and Caborca; and a num-

¹ The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Ober, who purchased it in Guaymas.

ber of ill-advised prospecting parties, coming by land or water, paid the penalty of foolhardiness. Writing about 1864, Historian Velasco recurred to the Seri to say:

This handful of bandits, assassins, thieves, brutes [inhumanos], infinitely vile and cowardly, on February 23 last, on the Guaymas road, at the place called Huerfano, assassinated 4 unhappy women, including a girl of 9 years, and 7 men who were conducting them in a cart toward that port.

He bitterly denounced the apparent apathy of the state and federal authorities, adding:

When it is read in history fifty years hence that a handful of murderous Ceris, certainly not more than 80 of the tribe able to bear arms, was able to domineer in the midst of their crimes with unexampled audacity on account of the debility of the government and the inhabitants, it will be regarded as a romance or a fable; for it seems impossible that in the nineteenth century such a condition of things could exist to degrade the reason, the morality, and the dignity of civilized man.

Yet a final note, apparently added in press, recorded that—

In consequence of the last incident of the Ceris, the prefect of Guaymas, Don Cayetano Navarro, took the field, returning with 12 women and 16 children prisoners; also 2 striplings and a vieillard. He slew 9 among those who had no leader. This was on Isla Tiburon. The Indians fled thence, and are supposed to be at Tepococ.¹

These may be considered as characteristic skirmishes attending the Encinas war. Other episodes followed, including the outbreaks of 1879, noted in part by M. Pinart. Bacuachito suffered in various locally important events that will never be written: when Don Jesus Omada, a water-guide to the expedition of 1895, was asked about the Seri at Bacuachito, he answered with cumulative vehemence, "They killed my father. They killed my brother! They killed my brother's wife!! They have killed half my friends!!!" As he spoke he was feverishly baring his breast; displaying a frightful scar over the clavicle, he exclaimed, "There struck a Seri arrow"; then he stripped his arm with a single sweep to reveal a ragged cicatrix extending nearly from shoulder to wrist, and added in a tone tremulous with pent bitterness, "The Seri have teeth!"

In the course of the half century from 1844 onward, the population of Sonora increased materially, and carried more than a proportionate increase in the development of agricultural and mineral resources; and, especially under the beneficent Diaz régime, the state passed from the condition of a remote frontier province into that of a well-governed commonwealth. Naturally this progress carried the Caucasian element, including that of blended blood, farther and farther away from the nonprogressive Seri; and thereby the horror and detestation awakened by the very utterance of the name of the lowly tribe were intensified beyond description or ready understanding. The traditions of arrow poisoning were kept alive, and, doubtless, growing; the recitals of carrion eating were repeated, and possibly—just possibly—magnified beyond the reality; the accounts of offense and defense by nails and

¹ Boletín de la Sociedad Mexicana de Geografía y Estadística, tomo XI, 1862, pp. 124-125.



TYPICAL SERI HOUSE ON THE FRONTIER

teeth (such as that of Jesus Omada) passed from mouth to mouth until—incredible as it may seem—the more timid Sonorenses stood in greater dread of these natural weapons of the Seri than of their brutal clubs and swift-thrown missiles, or even of their poisoned arrows; while traditions of cannibalism came up and received such general credence that the current items of Seri outrages, both in local gossip and in the Mexican and American press, customarily recounted savage butcheries ending with gruesome feastings on the raw or slightly cooked flesh of the victims. The shuddering antipathy felt for the perpetrators of these inhumanities even a thousand miles away increased toward their frontier, as light toward its source; the dread was deepened by the failure of punitive expeditions sent out again and again only to be balked by waterless sand-wastes or wrecking tiderips; and in 1894 and 1895, at least, the horror of the Seri was a daily and nightly incubus on half the citizens of Hermosillo and the tributary pueblos and ranchos, and a thorn in the flesh of the state officials.

The external history of the Seri since the spring of 1894 is fairly known, both through the direct researches and through press reports, and would seem to be typical. This era may be assumed to open with the arrival on Tiburon's shores of the sloop *Examiner*, carrying two San Francisco newspaper writers, Robinson and Logan, with two assistants, Clark and Cowell. The to-have-been-expected happened duly, save that two of the party escaped, and on reaching Guaymas advertised the disaster through correspondence and the press. Several of the accounts indicated that the two victims were not only slain but eaten, and various plans were laid in California, Arizona, and Sonora for the recovery of the bones¹—as if, forsooth, the omniverous and strong-toothed Seri spared anything save scattered teeth and split sections of the longer shafts of skeletons the size of those of *Homo sapiens*. While in Guaymas the two survivors set up claims for indemnity, which initiated international correspondence and inquiry into the details of the affair. These details are indicated, in sufficient fulness for present purposes, in a formal communication incorporated in the international correspondence, viz:

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, December 14, 1894.

SIR: Early in November I visited the Seri tribe of Indians, inhabiting Tiburon island in the Gulf of California and an area of several thousand square miles of the adjacent mainland in Sonora, Mexico. The visit was for the purpose of making collections under your authority as Secretary of the Smithsonian Institution; but I availed myself of the opportunity for obtaining additional information relating to the customs, habits, and history of the tribe. In addition to my own party I was accompanied by Señor Pascual Encinas, a prominent citizen of Hermosillo, and

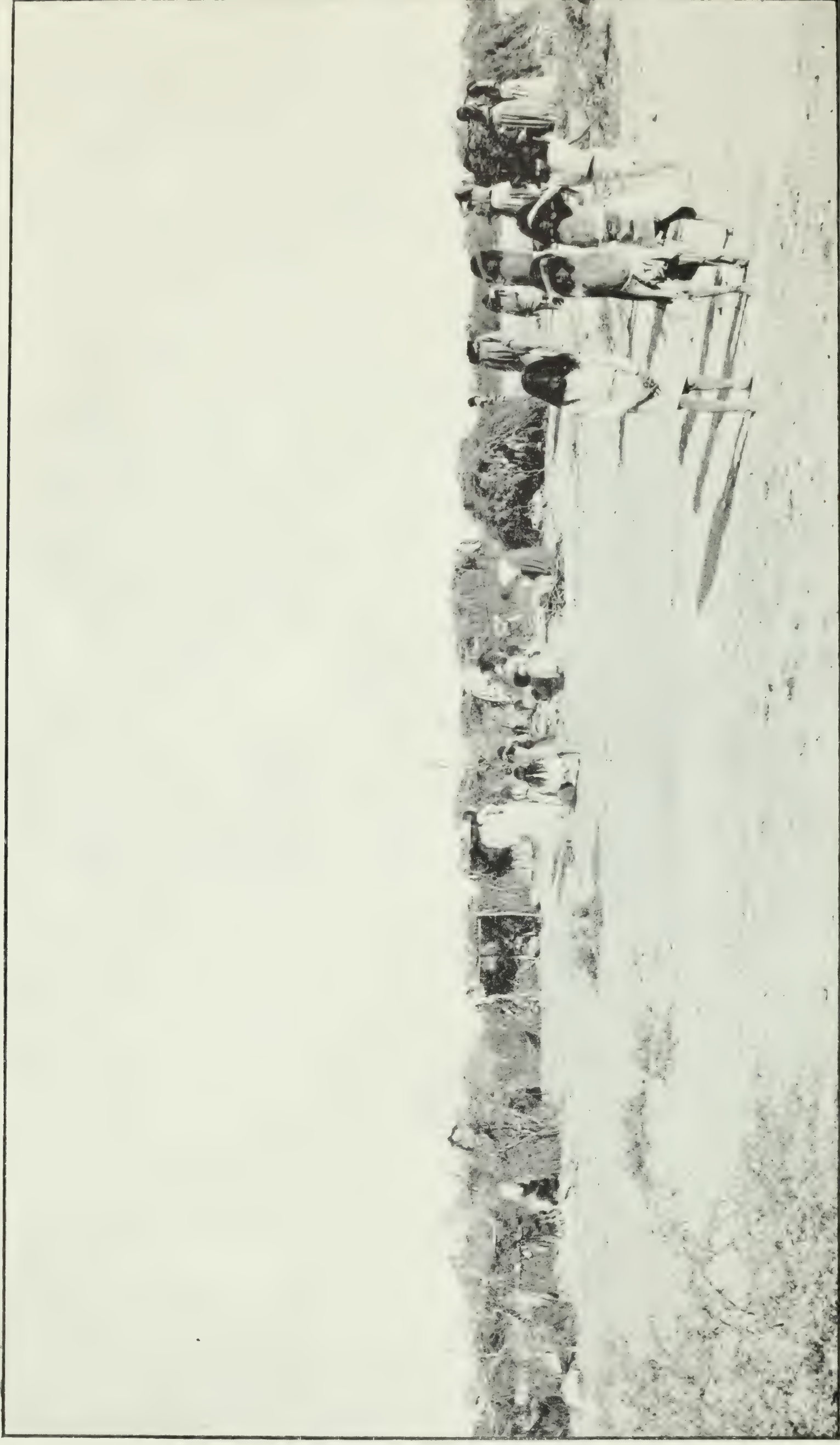
¹A number of Californians and Arizonians, especially M. M. Rice, of Phoenix, intimated a strong desire to join the 1895 expedition of the Bureau of American Ethnology for the express purpose of personally ascertaining the fate and seeking the remains of Robinson, who was extensively known in southern California and southwestern Arizona.

owner of several ranchos adjacent to, and one within, the territory claimed by the Seri Indians; also by Señor A. Alvemar-Leon of Hermosillo, a young Mexican gentleman educated in the United States. For Señor Encinas the Seri Indians have the highest regard, and his kindly motive in accompanying the party was to facilitate friendly intercourse with the Indians; Señor Alvemar-Leon acted as Spanish-English interpreter, and one of the tribe who speaks Spanish [Mashém] acted as the Seri interpreter.

One of the subjects of inquiry of the Indians related to the alleged killing of two Americans by the Seri Indians on Tiburon island during last spring at a date not definitely known either to the Indians or to myself. At first the Indians were indisposed to convey information on the subject, but after receiving presents from Señor Encinas and myself, and friendly assurances from the former, the interpreter for the tribe confessed the crime and detailed the circumstances, denying, however, that any of the Indians present at the place of conference (Rancho de San Francisco de Costa Rica, 17 leagues west-southwest of Hermosillo and near the coast) participated.

According to the first account given through the Indian interpreter, the Indians on the island saw a small vessel approach the shores of the island, and saw four men land therefrom in a small boat. The spokesman among the strangers made inquiry, chiefly by signs, as to whether game was abundant in the interior of the island, and was by signs answered in the affirmative by the chief of the tribe, who displayed a letter of authority from the state officials at Hermosillo. Then the strangers divided, two remaining on the shore by the small boat, while the spokesman and another, accompanied by several Indians, started toward the interior of the island. When they were some distance away—the account continues—some of the Indians remaining on shore indicated by signs a desire to borrow the rifle of one of the two men on the beach, and after some parley the rifle was turned over to them; then the Indians desired also to borrow the small boat in which the party of white men had landed, and after one of the two men remaining on the shore was put aboard the vessel, this, too, was placed in the hands of the Indians. Thereupon several of the Indians entered the small boat, carrying the white man's rifle, and rowed around a headland a short distance away. Passing this point they landed and a part of them ran quickly into the interior in such direction as to intercept the course of the white men. There they lay in wait until the strangers appeared, when they shot the spokesman, killing him almost instantly. On this the second white man cried out for help, whereupon he too was shot and wounded, and then (according to the first account) ran away and concealed himself in the bushes and was seen no more. The Indians who had borrowed the boat then went back to the shore, and reentered the boat with the intention of returning and capturing the fine vessel of the strangers; but as they approached the vessel, being at the time quite near the shore, the man on board arose suddenly with a gun pointed toward them and shouted, whereupon they dropped the borrowed gun and, leaping from the boat, ran away among the mesquite bushes, all escaping unhurt. The white man on the beach then, as the account ran, leaped into the boat, and, recovering his gun, rowed to the vessel and got aboard, when the two men at once made sail and escaped down the bay.

The foregoing account was given to Señor Encinas alone by the Indians through their interpreter, and was afterward conveyed to me through Señor Alvemar-Leon. Both of us recognized the incongruity with the character of the Seri Indians of that part of the narrative relating to the wounding and escape of the second man, and Señors Encinas and Leon and myself sought to impress the improbability of the account on the interpreter. Subsequently the Indians, through their interpreter, conveyed to Señor Encinas a modification of the account (after adhering to the first version for twenty-four hours), which agreed in all essential respects with the first, excepting the supplementary statement that some of the Indians (but neither the party who accompanied the white men nor those who followed in the boat) ran after the wounded man, caught him, shot him again—whereupon he again cried out—and



OCCUPIED RANCHERIA ON THE FRONTIER

then killed him with stones. This modified account, also, Señor Encinas duly conveyed to me.

Still later, in collecting linguistic material through the Seri interpreter with the assistance of Señor Alvemar-Leon, I recurred to the subject incidentally (or at least ostensibly so) on two or three occasions, partly with the view of verifying or disproving the current report that the men were eaten by the Indians; and since the first distrust on the part of the interpreter and the companions (by whom he was commonly surrounded) had worn off, the questions were answered freely and with apparent truth. In brief, the information gained in this way was a repetition in general terms of the statement of the killing of both men; but the responses indicated (1) that the Indians are not cannibals, (2) that they do not eat any portion or portions of the body of an enemy slain in war, (3) that they do not eat human flesh in a sacrificial way, and (4), specifically, that they did not eat the flesh of the two white men killed last spring. I am disposed to give credence to all of these statements.

Señor Encinas informed me that for a long time after the reputed killing of the two Americans on the island the Seri were exceptionally shy and were seldom seen on the mainland; that the first representatives of the tribe to appear were one or two old women who came to his rancho with much trepidation; that these representatives being not ill-treated, a man appeared, who was also well treated, and that still later other members of the tribe appeared, though it was only a few days before our visit that any considerable body of the Seri Indians showed themselves at their favorite mainland haunt on his rancho. It was his first communication with the Indians since the killing, and, both he and they agreed, the first confession of the crime outside of their own tribe.

While in Sonora various conflicting accounts of the affair were given me. One, to which I was disposed to attach credence by reason of the character of my informant and his explanation of the circumstances under which the information was gained, was given me (just before the visit referred to above) by ex-Consul Forbes, of Guaymas. This account corresponds in all essential details with that conveyed to my party by the Indians, except that, according to Mr Forbes' account, the survivors were altogether unarmed after the borrowing of the rifle by the Indians, and that when the man in the boat arose suddenly and shouted he pointed at the Indians not a gun but a stick, in the hope of deceiving them thereby, as he was fortunate enough to do.

It may be added that the Seri Indians are at the same time the most primitive and the most bloodthirsty and treacherous of the Indians of North America, so far as my knowledge extends; also that their character is well known throughout Sonora, and indeed generally throughout Mexico, Arizona, and the southern part of California. I was assured by the acting governor of Sonora and by the prefect of Hermosillo that it would be little short of suicide for even a Mexican official to visit these Indians or land on their island without an armed guard. Through conference with the Indians, also, I learned that any white man, Mexican, or Indian of another tribe coming in contact with them is killed without the slightest compunction, unless they are restrained by fear. Accordingly I am satisfied that the character of the Seri Indians is quite as bad as the unsavory reputation they have acquired throughout the Southwest.

It should be observed that while the Indians were unable to give the names of the men killed, their description of men and vessel agreed exactly with those of the newspaper correspondent Robinson and his companion, and with the sloop *Examiner*; and Mr Forbes' information was obtained direct from the survivors of the expedition of which Mr Robinson had charge. There can thus be no doubt that it was Mr Robinson and his companion who were killed by these Indians, and whose killing was confessed by them, as set forth above.

With great respect, your obedient servant,

W. J. MCGEE,
Ethnologist in charge.

Honorable S. P. LANGLEY,
Secretary of the Smithsonian Institution.

On first learning of the incident, months before the diplomatic correspondence began, the state and federal authorities promptly adopted vigorous punitive measures. A vessel carrying a force of federal troops was dispatched from Guaymas and a body of state troops were sent from Hermosillo with instructions to meet on the coast and capture the criminals at any cost, even to the extermination of the tribe if resistance was offered. But like so many others, the expedition failed; the horses of the land party were stalled in the sands and burrow-riddled plains, the vessel was harassed by storms and tidal currents, and the landing boats were swamped by the surf, while the Indians merely fled at sight of the invaders toward inaccessible lairs or remote parts of their territory; and when the water was gone and men and animals were at point of famishing, the forces retired without so much as seeing a single Seri.

During the ensuing autumn the tribe, having quenched their blood-feud in alien blood, turned toward peace, and sent a matron of the Turtle clan, known as Juana Maria, to Costa Rica—i. e., Rancho de San Francisco de Costa Rica—where she was gradually followed by younger matrons and children, then by youths, and finally by warriors (after the fashion of Seri diplomacy) to the aggregate number of about sixty. Here they were found by the first expedition of the Bureau of American Ethnology, in November, 1894; and here, under the still strong influence of the venerable Don Pascual, supplemented by small gifts and persistent pressure, they gradually “gave their language”, submitted to extensive photographing, confessed specifically to the Robinson killing, and yielded up nearly the whole of their portable possessions in the way of domestic implements and utensils, face-painting material, pelican-skin robes, snake-skin necklaces, etc.

With the return of the Bureau party to Hermosillo the Indians became restive and soon withdrew beyond the desert. In the course of the ensuing winter a group returned to the neighborhood of Costa Rica, where, by aid of strategy, seven warriors (including some of those seen at the rancho in the preceding November) with the families of four, were arrested, taken to Hermosillo, tried, and, according to oral accounts, banished. Irritated by this action, and connecting with it the visit of Don Pascual and the strangers desiring their language and sacred things, the clans resumed the warpath, displaying special animosity toward the residents of Costa Rica. There were a few minor skirmishes; then, at the instance of the state officials, a number of Papago Indians, who are feared by the Seri beyond all other enemies, were domiciled at the rancho, where their mere presence proved a sufficient protection. Meantime, according to apparently trustworthy press accounts, two small exploring parties entered Seriland; the first consisted of seven prospectors, who kept well together until about to leave the territory, when one of their number fell behind—and his companions saw him no more, though they carefully retraced their trail beyond the



GROUP OF SERI INDIANS ON TRADING EXCURSION

point at which he had stopped; the other was a German naturalist-pro prospector with two mozos (servant-companions), purporting to hail from Chihuahua, who started across the delta-plain of Rio Bacuache and Desierto Encinas with saddle animals, and never reappeared.

Then came the second expedition of the Bureau of American Ethnology, to which several Papago domiciled at Costa Rica were attached as guards. While the party were at the rancho the day before the first entrada into Seriland via Barranca Salina, a party of vaqueros from Rancho Santa Ana tended a herd of stock to the barranca for water; one of the animals strayed behind a dune, and the vaqueros, following its trail, came on a small band of Seri already devouring the entrails, and attacked them so vigorously that they escaped only by outrunning the horses, leaving behind all their unattached possessions, including a bow and quiver of arrows and an ancient and nonusable army rifle. This incident, albeit typical, was untimely, and doubtless aided in rendering the Indians too wild to permit communication with the aliens during the ensuing weeks spent in their territory.

After the withdrawal of this expedition the Seri resumed their range over the borderland plain, with the evident intention of avenging the insult of the invasion. There were a number of skirmishes, in which some of the Papago guards of the 1895 expedition were wounded and had horses killed under them, though they did customary execution on the worse-armed Seri; and extensively published press items indicate that, toward the end of January, 1896, a party of five gold prospectors landed on Tiburon, whence one escaped.

A well-attested episode ensued toward the end of 1896: Captain George Porter and Sailor John Johnson spent the later part of the summer in cruising the coasts of the Gulf, collecting shells, feathers, and other curios in the small sloop *World*. About the end of October they apparently anchored in Rada Ballena; and a day or two later Captain Martin Mendez, of Guaymas, in charge of the schooner *Otila*, being driven up the gulf and into Bahia Kunkaak by storms, came on a horde of Seri looting Porter's vessel. The episode received publicity on Mendez's return to Guaymas; United States Consular Agent Crocker instituted inquiries, and Governor Corral sent a force to Costa Rica, where, after some delay, a parley was held with a strong band of Seri under the chiefship of "a seven-foot warrior named El Mudo (The Mute), . . . so called for his reticence of speech."¹ The testimony obtained at the parley and from Captain Mendez indicates that Porter and Johnson landed, or at least approached the shore, probably in a small boat; that they were met by a shower of arrows, under which Johnson immediately fell, while Porter defended himself with a shot-

¹San Francisco Chronicle, October 16, 1898, p. 3. The details of the episode, including the correspondence of Consular Agent Crocker, were printed in the newspapers of San Diego (the place of residence of Porter and Johnson), as well as in those of San Francisco and other cities; and there was considerable correspondence concerning the matter with the State Department at Washington. Some reports recount that the bodies of Porter and Johnson were rent to fragments and devoured, but these details naturally lack confirmation. El Mudo's portrait appears in plate XIX.

gun, slaying five of the Seri before he was himself transfixed; that the vessel was then looted, and that Mendez and his crew were prevented from landing and apparently driven off by the Seri force. In the course of the parley the state officials "demanded the surrender of the ring-leaders in the massacre", with the alternative of "regarding the whole tribe as guilty and punishing them accordingly"; but El Mudo, evidently holding the invasion of the island as the initial transgression and deeming the loss of the tribe under Porter's marksmanship as more than commensurate with the Caucasian loss, peremptorily ended the conference and returned to the island. Vigorous efforts were made to pursue the tribesmen beyond their practically impassable frontier, with the usual product of ruined horses and famished riders. Then the episode died away in an armed neutrality strained somewhat beyond the normal. Meantime the Papago guards remained at Costa Rica. "They are continuously on the lookout for these Seris, and once or twice have killed a stray one or two."¹

Both before and after the Porter-Johnson episode schemes were devised by various parties, chiefly Californians, for obtaining concessions covering Tiburon and its resources, most of these schemes involving plans for the extermination of the Seri; and press accounts indicate that a concession covering the islands of the gulf above the latitude of 29° (i. e., including about half of Isla Tiburon) was granted to an American company of much distinction. It would appear from numerous news items that representatives of the company sought to land on Tiburon, where they were first cajoled with offerings of food, afterward found to be poisonous, and later driven off by an enlarged force of naked archers. A recent publication bearing some official sanction announces that "Mr W. J. Lyons, of Hermosillo, Sonora, has secured a concession for the exploration of the island and in November of this year will fit out an expedition for that purpose."² The various movements are significant as indices of current opinion and official policy with respect to the tribe.

On the whole, the later episodes are natural sequels of the eventful and striking earlier history of the Seri; and they can only be interpreted as pointing to early extinction of one of the most strongly marked and distinctive of aboriginal tribes.

¹ The quotations are from the account of T. H. Silsbee, of San Diego, prepared on his return from a visit to Costa Rica.

² El Estado de Sonora, Mexico. Sus Industrias, Comerciales, Mineras y Manufacturas. Obra Publicada bajo los Auspicios del Gobierno del Estado. Obra Ilustrada, Octubre de 1897. By J. R. Southworth, Nogales; p. 73.

TRIBAL FEATURES

DEFINITION AND NOMENCLATURE

According to Mashém and the clanmother known as Juana Maria, the proper name of the tribe known as Seri is *Kunkáak* (the first vowel obscure and the succeeding consonant nasalized; perhaps *Kⁿ-káak* or *K^m-káak* would better express the sound). According to Kolusio, as rendered by M Pinart, the Seri term for people or nation is *kom-kak*, while the Seri people are designated specifically as *Kmike*, this designation being practically equivalent phonetically (and doubtless sematically) to Sr Tenochio's general term for women, *kamykij*. Mashém was unable or unwilling to give the precise signification of the tribal appellation used by him, merely indicating Juana Maria and one or two other elderwomen squatting near as examples or types; but comparison of the elements of the term with those used in other vocables affords a fairly clear inkling as to its meaning. The syllable *kun* (or *kⁿ*, *kon*, *kom*, etc.) certainly connotes age and woman, and apparently connotes also life or living (*kun-kaïe*=an old woman, McGee; *i-kom*=a wife, *ekam*=alive, Bartlett; *hikkam*=a wife, *kmam-kikamman*=a married woman, *Yak-kom*=Yaqui tribe, Pinart; *kon-kabre*=an old woman, Tenochio), the forms being distinct from the word for woman (*kmamm*, McGee; *ék-e-mam*, Bartlett; *kmam*, Pinart and Tenochio) and widely different from the term for man (*kũ-tũmm*, McGee; *ék-e-tam*, Bartlett; *ktam*, Pinart; *tam*, Tenochio) with its several combining variants; there are also indications in numerous vocables that it connotes person or personality. On the whole, the syllable appears to be an ill-formulated or uncrystallized expression, denoting at once and associatively (1) the state of living or being, (2) personality, (3) age or ancientness (or both), and (4) either femininity or maternity (much more probably the latter), this inchoate condition of the term being quite in accord with other characters of the Seri tongue, and frequently paralleled among other primitive languages. The syllable *kaak* (or *kak*, and probably *kok*, *koj*, *kolch*, etc.) would seem to be a still more vague and colloidal term, despite the fact that it is used separately to designate the fire-drill. There are fairly decisive indications that it is composite, the initial portion denoting place and the final portion perhaps more vaguely connoting class or kind with an implication of excellence, both elements appearing in various vocables (too numerous to quote). On the whole, *kaak* would appear to be a typical egocentric or ethnocentric term, designating and dignifying Person, Place, Time,

and Mode, after the manner characteristic of primitive thought;¹ so that it may perhaps be translated "Our-Great-(or Strong-)Kind-Now-Here". The combination of the two syllables affords a characteristically colloidal connotation of concepts, common enough in primitive use, but not expressible by any single term of modern language; in a descriptive way the complete term might be interpreted as "Our-Living-Ancient-Strongkind-Elderwomen-Now-Here," while with the utmost elision the interpretation could hardly be reduced beyond "Our-Great-Motherfolk-Here" without fatal loss of original signification. It should be noted that the designation is made to cover the animals of Seriland (at least the zoic tutelaries of the tribe) and fire as well as the human folk.

The proper tribe name is of no small interest as an index to primitive thought, and as an illustration of an early stage in linguistic development. It is significant, too, as an expression of the matronymic organization, and of the leading rôle played by the clanmothers in the simple legislative and judicative affairs of the tribe; and it is especially significant as an indication of the intimate association of fire and life in primitive thought.

The designation "Seri", with its several variants, is undoubtedly an alien appellation, and neither Mashém nor Kolusio could throw light on its origin or meaning, though they did not apparently regard it as opprobrious. Peñafiel describes it as an Opata term; and Pimentel's Opata vocabulary² (extracted from the grammar and dictionary compiled by Padre Natal Lombardo) indicates its meaning satisfactorily, albeit without special reference to the tribe. The key term in this vocabulary is "*Sërerài*, velocidad de la persona que corre." The accent over the first vowel serves to indicate prolongation, so that term and definition may be rendered, literally, *se-erèrài*, speed of the person who runs. Analysis of the term shows that the essential factor or root is that introduced elsewhere in the same vocabulary as "*Ere*, llegar." Now, "llegar" is a protean and undifferentiated Spanish verb neuter, without satisfactory English equivalent; it may be interpreted as arrive, reach, attain, fetch, endure, continue, accomplish, suffice, ascend, or mount to, while as a verb active and verb reflective its equivalents are approach, join, proceed a little distance, unite, etc; it may be said to imply movement or process with a centripetal connotation—i. e., a connotation antithetic to that of the expressive irregular verb "ir" in its protean forms, including the ubiquitous and ever-present "vamos" (an American slang equivalent of the Castilian verb "llegar" in certain of its phases is the strong interjectory phrase, "get together"). The prefix *se* is merely an intensive, running not merely through the Opata, but throughout various tongues of the Piman stock. In his extensive vocabulary of the Pima and Papago Indians of Arizona (1871),³ Captain

¹ Cf. The Beginning of Mathematics, in the American Anthropologist, new series, vol. I, 1899, p. 651.

² Vocabulario Manual de la Lengua Ópata, por Francisco Pimentel; Boletín de la Sociedad Mexicana de Geografía y Estadística, tomo X, 1863, pp. 287-313.

³ In the archives of the Bureau of American Ethnology.

F. E. Grossmann defines the term “*se*, very, ad. (prefix)”, and over a hundred and fifty of his terms illustrate the use of this adjectival or adverbial prefix as an undifferentiated yet vigorous intensive (e. g., *uf*, female or woman, *se-uf*, a lady—great or grand woman; *ō’k*, high or height, *se-ō’k*, highmost); and in the Pimentel vocabulary this signification is attested by several other terms (e. g., “*Sereraí*, paso menudo y bueno”). Finally, the intercalated consonant *r* is a common participial element in the Piman, while the suffix *ai* is a habitual assertive termination, as shown by various terms in the Pimentel and other vocabularies. Dropping this termination, the expression becomes *se-erer*, or—without the nonessential participial element—*se-ere*, signifying (so far as can be ascertained from the construction of the language) “moving”, or “mover”, qualified by a vigorous intensive.¹ To one familiar with the strikingly light movement characteristic of the Seri—a movement far lighter than that of the professional sprinter or of the thoroughbred “collected” by a skilful equestrian, and recalling that of the antelope skimming the plain in recurrent impulses of unseen hoof-touches, or that of the alert coyote seemingly floating eerily about the slumbering camp—this appellation appears peculiarly fit; for it is the habit of the errant Seri to roam spryly and swiftly on soundless tiptoes, to come and go like fleeting shadows of passing cloudlets, and on detection to slip behind shrub or rock and into the distance so lightly as to make no audible sign or visible trail, yet so fleetly withal as to evade the hard-riding horseman. The Seri range over a region of runners: the Opata themselves are no mean racers, since, according to Velasco and Bartlett, “In twenty-four hours they have been known to run from 40 to 50 leagues”;² and, according to Lumholtz, their collinguals, the Tarahumari, or “Counting-Runners”, are named from their custom of racing,³ and display almost incredible endurance:

An Indian has been known to carry a letter from Guazapares to Chihuahua and back again in five days, the distance being nearly 800 miles. In some parts where the Tarahumaris serve the Mexicans they are used to run in the wild horses, driving them into the corral. It may take them two or three days to do it, sleeping at night and living on a little pinole. They bring in the horses thoroughly exhausted, while they themselves are still fresh. They will outrun any horses if you give them time enough. They will pursue deer in the snow or with dogs in the rain for days and days, until at last the animal is cornered and shot with arrows or falls an easy prey from sheer exhaustion, its hoofs dropping off.⁴

¹The latter form (*se-ere*) corresponds precisely with the current Papago pronunciation of the term, though none of the various Papago informants consulted were able to interpret the expression; indeed, they simply relegated it to the category of “old names” which they deemed it needless to discuss. An archaic form of orthography, noted in the synonymy (pp. 128–130), is SSeri, which suggests the same sounding of the initial sibilant.

²From 105 to 130 miles; Bartlett, *Personal Narrative*, vol. I, p. 445.

³*Memoirs of the International Congress of Anthropology*, Chicago, 1894, p. 104. In a letter to Mr F. W. Hodge, under date of September 11, 1900, Dr Lumholtz says: “After renewed investigation I have come to another opinion regarding the meaning of the tribal name *Tarahumare*. This word is a Spanish corruption of the native name ‘Ralameri’. Though the meaning of this word is not clear, that much is certain that *rala* or *tara* means ‘foot’, and I therefore take it that we must be at least approximately correct when we say that the word signifies ‘foot-runner’.”

⁴*American Anthropologist*, vol. VIII, 1895, p. 92.

The Papago, of the same region and linguistic stock, have a racing game in which a ball of wood or stone caught on the foot is thrown, followed, and thrown again until the two or more rival racers have covered 20 to 40 miles in the course of a few hours; and their feats as couriers and trailers are quite up to those of the Opata. Yet among all these tribes, and among the Mexicans as well, the Seri are known as *the* runners par excellence of the Sonoran province; and it is but natural that their astounding swiftness and lightness of foot should have brought them an appellation among contemporaries to whom these qualities peculiarly appeal.

Accordingly, both derivation and connotation give meaning to the name, and warrant the rendering (much weakened by linguistic infelicities) of "spry" or "spry-moving", used in substantive sense and with an intensive implication.

The chronicles of the tribe, especially those written during the seventeenth and eighteenth centuries, indicate that the alien designation was applied loosely and with little appreciation of the tribal organization, just as was the case elsewhere throughout the continent. Gradually the chroniclers took cognizance of intertribal and intratribal relations, and introduced various distinctions in nomenclature expressing tribal or subtribal distinctions of greater or less importance. One of the earliest distinctions was that between the Seri and the Tepoka, and this distinction has been consistently maintained by nearly all later authorities, despite the commonly accepted fact (brought out most authoritatively by Hardy) that the tongues of the tribes are substantially alike. Another early distinction was that made between the Seri and the Guayma; it was based primarily on diversity of habitat and persistent enmity, though all the earlier authorities agreed, as well shown by Ramirez, that the tongues were essentially identical. The distinction has been maintained by most authorities and strongly emphasized by one (Pinart, as quoted by Bandelier), and since the Guayma are extinct, and hence beyond reach of direct inquiry, the early interpretation of tribal relation must be perpetuated.¹ Still another distinction was that made between the Upanguayma and the Guayma, and inferentially the Seri also; although the grounds for this distinction were not specifically stated, it seems to have grown out of diversity in habitat merely; but there were clear implications that the tribe or subtribe was affiliated linguistically with the Guayma, and hence with the Seri, and this assignment has been adopted by leading authorities, including Pimentel and Orozco. Among the earlier distinctions based on indus-

¹ In view of the clear indications, both a priori and a posteriori, that the latest Guayma survivors must have taken the language of the Piman (Yaqui) tribesmen with whom they found refuge, and in view of his failure thus far to present his data for public consideration, M Pinart's inference that the Guayma belonged linguistically to the Piman stock can hardly be admitted to hold against the specific statements of the Jesuit missionaries and such accomplished inquirers as Ramirez and Pimentel.

trial factors was the setting apart of the Salineros, or Seri Salineros; yet this distinction, fortuitous and variable at the best, expressed no essential character and has not been maintained. A much later distinction was that between the Seri and Tiburones, emphasized by Mühlenpfordt and exaggerated by Buschmann; but there seem to have been no better grounds for it than misapprehensions naturally attending a slowly crystallizing nomenclature. In any event it has not been maintained.

At several stages the chroniclers coupled the Seri with other tribes, on various grounds: in the eighteenth century they were thus combined with the Pima, the Piato, and especially the Apache tribes. In the earlier half of the nineteenth century they were frequently coupled in similar fashion with the Pima and Apache tribes, and in the later half of the nineteenth century, and even in its last lustrum, they have been similarly combined with the Yaqui. The later combinations seem to explain the earlier: the Yaqui outbreaks withdraw portions of the arm-bearing population from the Seri frontier, and the marauders take advantage of the withdrawal so regularly that a Yaqui scare is invariably followed by a Seri scare, and hence the two warlike tribes are constantly associated in the minds of the Sonorenses as synchronous insurrectionists; and scrutiny of the earlier chronicles indicates that most of the so-called combinations of former times were of similar sort.

On putting the chronicles together, it seems clear that the term "Seri" was originally of lax application, but was gradually restricted to the tribe inhabiting Tiburon and ranging adjacent territory, including the collingual but inimical Guayma and Upanguayma, and also the collingual and cotolerant Tepoka; and that the various Piman tribes, as well as the Apache, were always distinct, and commonly if not invariably inimical.

The ethnic relations of the Seri people attracted early and repeated attention. Humboldt gave currency, albeit not unquestioningly, to a supposed Chinese or related Oriental affiliation; Hardy noted the similarity of the Seri tongue to that of the Patagonians; Lavandera classed the language as Arabic; Stone and Bancroft circulated a supposed identification of the speech with the Welsh; Ramirez, and more especially Pimentel, narrowed the field of affiliation to Mexico and defined the tongue as distinct; Orozco y Berra, and more especially Malte-Brun, slightly reextended the field and suggested affiliation with the Caribs; while Herzog, Gatschet, and Brinton reextended the field in another direction and saw, in a vocabulary obtained from a Seri scion but alien thinker, similarities between the Serian and Yuman tongues. The recent researches tend strongly to corroborate the evidence collected and the conclusions reached by Ramirez and Pimentel; for the somewhat extended comparisons between the Serian and neighboring languages (introduced and discussed in other paragraphs) indicate that the

Seri tongue is distinct save for two or three Cochimi or other Yuman elements, which may be loan words such as might readily have been obtained through the largely inimical interchange of earlier centuries described by Padre Juan Maria de Sonora and other pioneer observers—certainly the slight and superficial similarities with other tongues of the region seem insufficient to meet the classific requirement of supposititious descent from “a common ancestral speech”.¹ Accordingly the group may be defined (at least provisionally) as a linguistic family or stock, and may be distinguished by the family name long ago applied by Pimentel and Orozco, with the termination prescribed in Powell’s fifth rule,² viz, *Serian*. Conformably, the classification of the group would become—

Serian stock, comprising—

Seri tribe, including Tiburones and (certain) Salineros;

Tepoka tribe;

Guayma tribe;

Upanguayma tribe.

Naturally this classification is provisional in certain respects. It is little more than tentative in so far as the Tepoka are concerned, since no word of the Tepoka tongue has ever been recorded, so far as is known, and since the tribe is still extant and within reach of research; it must be held provisional also in respect to the separateness of the stock, which may be found in the future to be affiliated with neighboring stocks, though the effect of the more recent and more critical researches in eliminating supposed evidences of affiliation points in the opposite direction. The arrangement is in some measure provisional also with respect to the relations between the long-extinct Guayma and Upanguayma and the type tribe, especially since contrary suggestion has been offered in terms implying the existence of unpublished data; yet the presumption in favor of the critical work by Ramirez, Pimentel, and Orozco is so strong that practically this feature of the classification may be deemed final.

No attempt has been made to render the tribal synonymy exhaustive, though search of the records has incidentally brought out the more important synonyms, as follows:

Seri Tribe

CERES—1826; Hardy, Travels, p. 95.

CERI—1875; Pimentel, Lenguas Indígenas, tomo II, p. 229.

CERIS—1745; Villa-Señor, Teatro Americano, p. 391.

CERIS TEPOCAS—1850; Velasco, Noticias Estadísticas, p. 132.

HERI—1854; Buschmann, Die Spuren der aztekischen Sprache, p. 221.

HERIS—1645; Ribas, Triumphos de Nuestra Santa Fee, p. 358.

HERISES—1690 (?); Van der Aa, map.

¹Indian linguistic families, by J. W. Powell, in Seventh Annual Report, Bureau of Ethnology, 1885-86 (1891), p. 11.

²Ibid., p. 10.

SADI—1896; San Francisco Chronicle, January 24.

SE-ERE—Etymologic form.

SERES—1844; Mühlenpfordt, Republik Mejico, Band 1, p. 210.

SERI—1754; [Ortega], Apostolicos Afanes, p. 244.

SERIS—1694; Mange, Resumen de Noticias (Documentos para la Historia de Mexico, série 4, tomo 1, p. 235).

SERI SALINEROS—1842; Alegre, Historia de la Compañia de Jesus, tomo III, p. 117.

SERIS SALINEROS—1694; Mange, Resumen de Noticias (Documentos, série 4, tomo 1, p. 321).

SERYS—1754; [Ortega], Apostolicos Afanes, p. 367.

SORIS—1900; Deniker, The Races of Man, p. 533.

SSERI—1883; Gatschet, Der Yuma Sprachstamm, p. 129.

ZERIS—1731; Dominguez, Diario (MS.).

KMIKE—1879; Pinart, MS. vocabulary.

KOMKAK—1879; Pinart, MS. vocabulary.

KUNKAAK—1896; McGee and Johnson, "Seriland", Nat. Geog. Mag., vol. VII, p. 133.

SALINEROS—1727; Rivera, Diario y Derrotero, l. 514-1519.

TIBURON—1799; Cortez (Pacific Railroad Reports, vol. III, p. 122).

TIBURONES—1792; Arriçivita, Crónica Seráfica, segunda parte, p. 426.

TIBUROW CERES—1826; Hardy, Travels, p. 299.

Tepoka Tribe

TEPECO—1847; Disturnell, Mapa de los Estados Unidos de Mejico, New York.

TEPOCA—1748; Villa-Señor, Teatro Americano, p. 392.

TEPOCA CERES—1826; Hardy, Travels, p. 299.

TEPOCAS—1748; Villa-Señor, Teatro Americano, p. 391.

TEPOCOC—1865; Velasco, Bol. Soc. Mex. Geog. y Estad., tomo XI, p. 125.

TEPOKA—Phonetic form.

TEPOPA—1875; Dewey, map.

TEPOQUIS—1757; Venegas, Noticia, tomo II, p. 343.

TOPOKIS—1702; Kino, map (in Stocklein, Der Neue Welt-Bott).

TOPOQUIS—1701; Kino, map (in Bancroft, Works, vol. XVII, 1889, p. 360).

Guayma Tribe

BAYMAS—1754; [Ortega], Apostolicos Afanes, p. 377.

GAYAMA—1826 (?); Pike (Balbi), (in Pimentel, Lenguas Indígenas, tomo II, p. 234).

GUAIMA—1861; Buckingham Smith, Heve Grammar, p. 7.

GUAIMAS—1702; Kino, map (in Stocklein, Der Neue Welt-Bott).

GUAYMAS—1757; Venegas, Noticias, tomo II, p. 79.

GUAYMA—1701; Juan Maria de Sonora, Report (Documentos para la Historia de Mexico, série 4, tomo V, p. 154).

GUAYMAS—1700; Juan Maria de Sonora, Report (Documentos para la Historia de Mexico, série 4, tomo V, p. 126).

GUAYMI—1882; Bancroft Works, vol. III, (Native Races, vol. III), p. 704.

GUAYMIS—1844; Mühlenpfordt, Republik Mejico, Band 1, p. 210.

GUEIMAS—1748; Villa-Señor, Teatro Americano, p. 401.

GUEYMAS—1748; Villa-Señor, Teatro Americano, p. 402.

GUIMAS—1763; [Nentwig?], Rudo Ensayo, p. 229.

GUIMIES (?)—1701; Kino, map (Bancroft, Works, vol. XVII, 1889, p. 360).

Upanguayma Tribe

HOUPIN GUAYMAS—1829; Hardy, map.

JUMPANGUAYMAS—1860; Velasco, Bol. Soc. Mex. Geog. y Estad., tomo VIII, p. 292.

JUPANGUEIMAS—1748; Villa-Señor, Teatro Americano, p. 401.

OPAN GUAIMAS—1763; [Nentwig?], *Rudo Ensayo*, p. 229.

UPANGUAIMA—1864; Orozco y Berra, *Geografía de las Lenguas*, p. 42.

UPANGUAIMAS—1878; Malte-Brun, *Congres International des Américanistes*, tome II, p. 38.

UPANGUAYMA—Synthetic form.

UPANGUAYMAS—1882; Bancroft, *Works* (Native Races, vol. I, p. 605).

UPAN-GUAYMAS—1890; Bandelier, *Investigations in the Southwest*, p. 75.

Possibly the name *Cocomagues* (1864, Orozco y Berra, *Geografía de las Lenguas*, p. 42), or *Cocomaques* (1727, Rivera, *Diario y Derrotero*, I, 1514–1519) should be introduced among the synonyms of the Seri, but in the absence of definite information it may perhaps better be left unassigned.¹

Of the four tribes assigned to the stock, the Upanguayma have been extinct probably for more than a century; the Guayma may survive in a few representatives probably of mixed blood and adopted language; the Tepoka have never received systematic investigation, but appear to survive in limited numbers on the eastern coast of Gulf of California about the embouchure of the Rio Ignacio sand-wash; while the Seri alone continue to form a prominent factor in Sonoran thought.

EXTERNAL RELATIONS

The most conspicuous characteristic of the Seri tribe as a whole is isolation. The geographic position and physical features of their habitat favor, and indeed measurably compel, isolation: their little principality is protected on one side by stormy seas and on the other by still more forbidding deserts; their home is too hard and poor to tempt conquest, and their possessions too meager to invite spoliation; hence, under customary conditions, they never see neighbors save in chance encounters on their frontier or in their own predatory forays—and in either case the encounters are commonly inimical. The natural isolation of the habitat is reflected in modes of life and habits of thought; and during the ages the physical isolation has come to be reflected in a bitter and implacable hereditary enmity toward aliens—an enmity apparently forming the strongest motive in their life and thought, and indeed grown into a persistent instinct. Thus the Seri stand alone in every respect; they are isolated in habitat and still more intensely isolated in habits of thought and life from all contemporaries; they far out-Ishmael the Ishmael of old on Araby's deserts.

The isolation of the Seri in thought and feeling is well illustrated by the relations with their nearest neighbors (activitally as well as geographically), the Papago Indians. The Papago are much esteemed in Sonora as fearless fighters, always ready to join or even to lead a forlorn hope; yet when the expedition of 1895 was projected it was found no easy matter to induce the picked Papago guards quartered at Costa Rica to enter Seriland. They were ready, indeed mildly eager, for fray, provided it were on the frontier; but they held back in dread

¹ These names seem rather to be Yuman; cf. *Cocopa*, *Coconino*, *Cocomaricopa*, *Kohun*, etc.

from actual invasion of the territory of the hereditary enemy. Like representatives of the faith-dominated culture-grades generally, they spoke weightily of inherent rights descended from the ancient time, even back unto the creation; they repeatedly declared the right of the Seri to protect their territory because it was *theirs*; yet their converse but served to show the depth and persistence of their abhorrence of the Seri and of everything pertaining to them. And when gales arose to delay the work, when the frail craft of the party was storm-buffed and lost for days, when they were seized with the strange sickness of the sea, when the salt and sugar mysteriously disappeared (having been secretly sacrificed to diminish suffering from thirst), when all of the earth-powers and air-powers seemed to be arrayed against the expedition, they stoically held it to be but just punishment for a sacrilegious infraction of the ancient law—and their steady adherence to duty, despite tradition and physical difficulty and constant danger, revealed a real heroism. The strain was no slight one; it may have been felt more by the stay-at-homes than by the men in action; certainly a sister of one of the party (Anton Castillo) and spouse of a supporter at the supply station broke under the strain, and died of her terrors—and the return of the party was, to the Papago women and oldsters at least, as the rising of the dead. The dread inspired by the personal presence of the alien is stronger still; when the Seri rancharia at Costa Rica was visited in 1894 it was found needful to keep the Papago interpreter and others of the tribe at a distance, since the mere sight of the inimical tribesmen threw even the women and children into watchful irritation, like that of range-bred horses at scent of bear or timber-wolf, or that of oft-harried cats and swine at sight of passing dog—they instinctively huddled into circles facing outward, and ceased to think connectedly under the stress of nervous tension. The irritation was so far mutual that it was days before the usually placid interpreter, José Lewis, recovered his normal spirits; while the 1895 interpreter, Hugh Norris, was actually rendered ill by the mere entrance into Seriland at Pozo Escalante. And the antipathy between Seri and Yaqui is nearly as great as that between the common-boundary neighbors.

The instinctive antagonism, or race antipathy, between the Seri and the widely distinct Caucasian is less trenchant and intense than the local antipathy; yet even between Seri and Caucasian there would seem to be hardly a germ of sympathy. In the days of his prime, the Tiburon islanders flocked around Don Pascual, first as a provider of easy provender and later as a superpotent shaman whose wrath bore destruction; yet their allegiance was never more than that of the cowed and beaten brute to a hated trainer, and his coming never brought a smile to their stolid features—indeed, his passage among their jacales was met with the same stolid yet sinister indifference accorded the solitary visitor to a menagerie of caged carnivores. And no sooner did his vision become

impaired than their fear-born veneration evaporated, and their native antipathy reappeared in original virulence. The 1894 party was fortunate in successfully treating a sick wife of sub-chief Mashém, and subsequently spent days in the rancheria, distributing gifts to old and young in a manner unprecedented in their experience and making liberal exchanges for such small possessions as they wished to spare; yet, with a single possible exception, they succeeded in bringing no more human expression to any Seri face or eye than curiosity, avidity for food, studied indifference, and shrouded or snarling disgust. Among themselves they were fairly cheerful, and the families were unobtrusively affectionate; yet the cheerfulness was always chilled and often banished by the approach of an alien. The Sonorenses generally hold the Seri in indescribably deep dread as uncanny and savage monsters lying beyond the human pale; while the reciprocal feeling on the part of the Seri toward Caucasians, and still more toward Indian aliens, seems akin to that of the average man toward the rattlesnake, which he flees or slays without pause for thought—it seems nothing less than intuitive and involuntary loathing. The Seri antipathy is at once deepened into an obsession and crystallized into a cult; the highest virtue in their calendar is the shedding of alien blood; and their normal impulse on meeting an alien is to kill unless deterred by fear, to flee if the way is clear, and to fawn treacherously for better opportunity if neither natural course lies open.

Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guayma and Upanguayma, displacing and nearly destroying the Tepoka, and outlawing individuals and (apparently) small groups. The earlier chronicles indicate that the Jesuit missionaries, and after them the Franciscan friars and the secular officials, sought to scatter the tribe by both cajolery and coercion, and endeavored to divide families by restraint of women and children and by banishment of wives; there are loose traditions, too, of the capture and enslavement of Indian and Caucasian women in Seriland; yet the great fact remains that not a single mixed-blood Seri is known to exist, and that no more than two of the blood (Kolusio and perhaps one other) now live voluntarily beyond the territorial and consanguineal confines of the tribe. The romantic story of a white slave and ancestress of a Seri clan, sometimes diffused through pernicious reportorial activity, is without shadow of proof or probability; the tradition of the captivity of a Papago belle was corroborated, albeit indefinitely, by Mashém's naive admission that an alien woman was once kept as a slave to a childless death due to her inaptitude for long wanderings; and there is not a single known fact indicating even so much as miscibility of the Seri blood with that of other varieties of the genus *Homo*. Naturally the presumption of miscibility holds in the absence of direct evidence; yet the presumption

is at least partially countervailed by conspicuous biotic characters, such as color, stature, etc., so distinctive as almost to seem specific: the Seri are distinctively dark-skinned, their extreme color-range (so far as known) being less than their nearest approach to any neighboring tribe; they are nearly as distinctive in stature, the difference between their tallest and shortest normal adults being apparently less than that between their shortest and the tallest of the neighboring Papago—though they are not so far from the more variable and often tall Yaqui; and they appear to be no less distinctive in such physiologic processes as those connected with their extraordinary food habits. Still more distinctive are the demotic characters connected with their habits of life and modes of thought; and when the sum of biotic and demotic characters is taken, the Seri are found to be set apart from all neighboring Sonoran tribes by differences much more striking than the individual range among themselves.¹

It is especially noteworthy that the Seri have held aloof from that communality of the deserts which has brought so many tribes into union with each other and with their animal and vegetal neighbors through common strife against the common enemies of sun and sand—the communality expressed in the distribution of vital colonies over arid plains, in the toleration and domestication of animals, in the development of agriculture, and eventually in the shaping of a comprehensive solidarity, with the intelligence of the highest organism as the controlling factor.² Dwelling on a singularly prolific shore, the Seri never learned the hard lesson of desert solidarity, but looked on the land merely as a place of lodgment or concealment, or as a source of luxuries such as cactus tunas, mesquite beans, and tasty game; they never formed the first idea of planting or cultivating, and their only notion of harvesting and storing against time of need was the intolerably filthy one of nature's simplest teaching; they apparently never grasped the concept of cooperation with animals, and came to tolerate the parasitical coyote only in that its persistence was greater than their own, and in so far as it was stealthy enough to hide its travail and the suckling of its young against their ravening maws; and they apparently never rose to real recognition of their own kind in alien forms, but set their hands against agricultural and zoocultural humans as peculiarly potent and hence especially obnoxious animals. Naturally their racial intolerance was seed of battle and blood-feud; and they would doubtless have melted away under the general antagonism but for the natural barriers and unlimited food of their restricted domain.

At present, as for the later and best-known decades of their history,

¹ It seems probable that the Seri were nearer to tribes of southern Baja California than to those of Sonora at the time of the earliest explorations, yet that the distinction was sufficiently strong to warrant the extension of the proposition to these tribes also.

² *The Beginning of Agriculture*, *American Anthropologist*, vol. VIII, 1895, p. 350. *The Beginning of Zooculture*, *ibid.*, vol. x, 1897, p. 215.

the Seri are absolutely without extratribal affiliations, or even sympathy. When the chronicles of three centuries are scanned in the light of recent knowledge, it seems practically certain that they have been equally isolated since the dawn of Caucasian history in Mexico; and both recent data and the chronicles combine with the principles of demotic development to indicate that the Seri have stood alone from the beginning of their tribal career, and have never foregathered with the neighboring tribes of distinct blood, distinct arts and industries, distinct organization, distinct language, and distinct thought and feeling.

The present isolation of the Seri throws light on their early history and reveals the extent of the misapprehension of the pioneer missionaries, who half deluded themselves and wholly deluded distant readers into the notion that the Seri were really proselyted and actually collected in the mission-adjuncts of military posts established to protect settlers against forays of the tribe; for, as illumined by later and fuller knowledge of the tribal characteristics, the chronicles are seen to indicate merely that a few captives, malingerers, cripples, spies, and tribal outcasts were harbored at the missions until death and occasional escapes brought the colonies to a natural end, with no real assimilation of blood or culture on either side. So, too, the persistent tribal antipathy reveals the error of confounding the independent or even inimically related outbreaks of the Seri and of the Pima or Apache with the concerted action of confederated tribes. Doubtless the ever-watchful spies from Tiburon habitually gave notice of the disturbance due to outbreaks of contemporary tribes, just as they do today when the local soldiery are withdrawn for duty on the Yaqui frontier; naturally the civil and military authorities were thereby led to provide for protection against the Seri and Piato, against the Seri and Pima, or against the Seri and Apache at each period of disturbance, just as they provided against the Seri between periods; and it would appear that this association in thought and speech led to the unconscious magnification, in the minds of the chroniclers, of a supposed alliance.

In brief, the tribal relations of the Seri seem always to have been antipathetic, especially toward the aboriginal tribes of alien blood, in somewhat less measure toward Caucasians, and in least—yet still considerable—degree toward their own collinguals and (presumptive) consanguineals.

POPULATION

So far as could be ascertained by inquiries of and through Mashém in 1894, the Seri tribe then comprised about 60 or 70 warriors, with between three and four times as many women and children—i. e., the population was apparently between 250 and 350. The group of about 60 (including 17 warriors) seen at Costa Rica was evidently growing rapidly, to judge from the proportion of youths of both sexes, infants in arms, and pregnant women; and there are other indications that

the tribe is prolific and well-fitted to survive unless cut off in consequence of the hereditary antipathy toward alien blood and culture.

The population estimates of the past are naturally vague. In 1645 Ribas spoke of the tribe as "a great people"; and a century later Villa-Señor expressed himself in somewhat similar terms, and described their range in such manner as to indicate a population running into thousands. A few years after Villa-Señor (in 1750), Parilla claimed to have annihilated the entire tribe, with the exception of 28 captives; but according to Velasco's estimates, the people numbered fully 2,000 some thirty years later, when the tribe was, however, once more nominally annihilated. In 1824 Troncoso estimated the Seri at over 1,000, and two years later Retio reckoned the population of Isla Tiburon alone at 1,000 or 1,500, while Hardy thought the entire tribe might number 3,000 or 4,000 at the utmost. About 1841 De Mofras put the aggregate population at 1,500; and at the time of the vigorous invasion by Andrade and Espence (1844), when a considerable number of the tribe were captured and a few slain, the total population was estimated at about 550—though it is probable that a good many tribesmen were left out of the reckoning. According to the chroniclers, a number of the Seri were slain after, as well as before, this invasion; and in 1846 Velasco estimated the tribe at less than 500, including 60 or 80 warriors. This estimate was in harmony with that made by Señor Encinas, who reckoned the tribe at 500 or 600 at the beginning of his war, in which half the tribe lost their lives. The figures of Velasco and Encinas correspond fairly with the reckoning by Mashém in 1894, due allowance being made for natural increase and for the losses through occasional skirmishes; and Mashém's count is shown not to be excessive by the considerable number of jacales and rancherias and well-trodden pathways found throughout Seriland in 1895.

On the whole it seems probable that the Seri population extended well into the thousands at the time of the Caucasian invasion; it seems probable, also, that the body was then too large for stability under its feeble institutional bonds, and hence threw off by fission the Guayma and Upanguayma fractions, and the Angeles, Populo, and Pueblo Seri fragments. Furthermore, it seems probable that the prolific group fairly held its own against these normal losses and repeated decimations by battle up to the Migueletes-Cimarrones war of 1780, despite the vaunted annihilation in 1750; but that thenceforward the death-rate due to increasingly frequent encounters with incoming settlers exceeded the birth-rate, gradually reducing the tribe from some 2,000 to the 250 or 300 surviving the Encinas conflict. Finally, it seems probable that the tribe has again held its own and perhaps increased slowly under the renewed isolation of the last decade or two.

SOMATIC CHARACTERS

Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.

The mean stature of the adult Seri may be estimated at about 6 feet (1.825 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet 9 inches (1.73 meters) for the females, these estimates resting on visual comparisons between Caucasians of known stature and about forty adult Seri of both sexes at Costa Rica in 1894. In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11½ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.¹ These pictures and some thirty unpublished photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlička, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3¾ inches (1.62 meters),² or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mudo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fear-some shrinking from the ordeal of photographing) can hardly exceed

¹ The average net height and weight of the unit figure (that of the author) are about 5 feet 8½ inches and 200 pounds, respectively.

² Or about 1.6176 meters estimated by the method of Rollet (cf. *The Races of Man*, J. Deniker, London, 1900, p. 33).

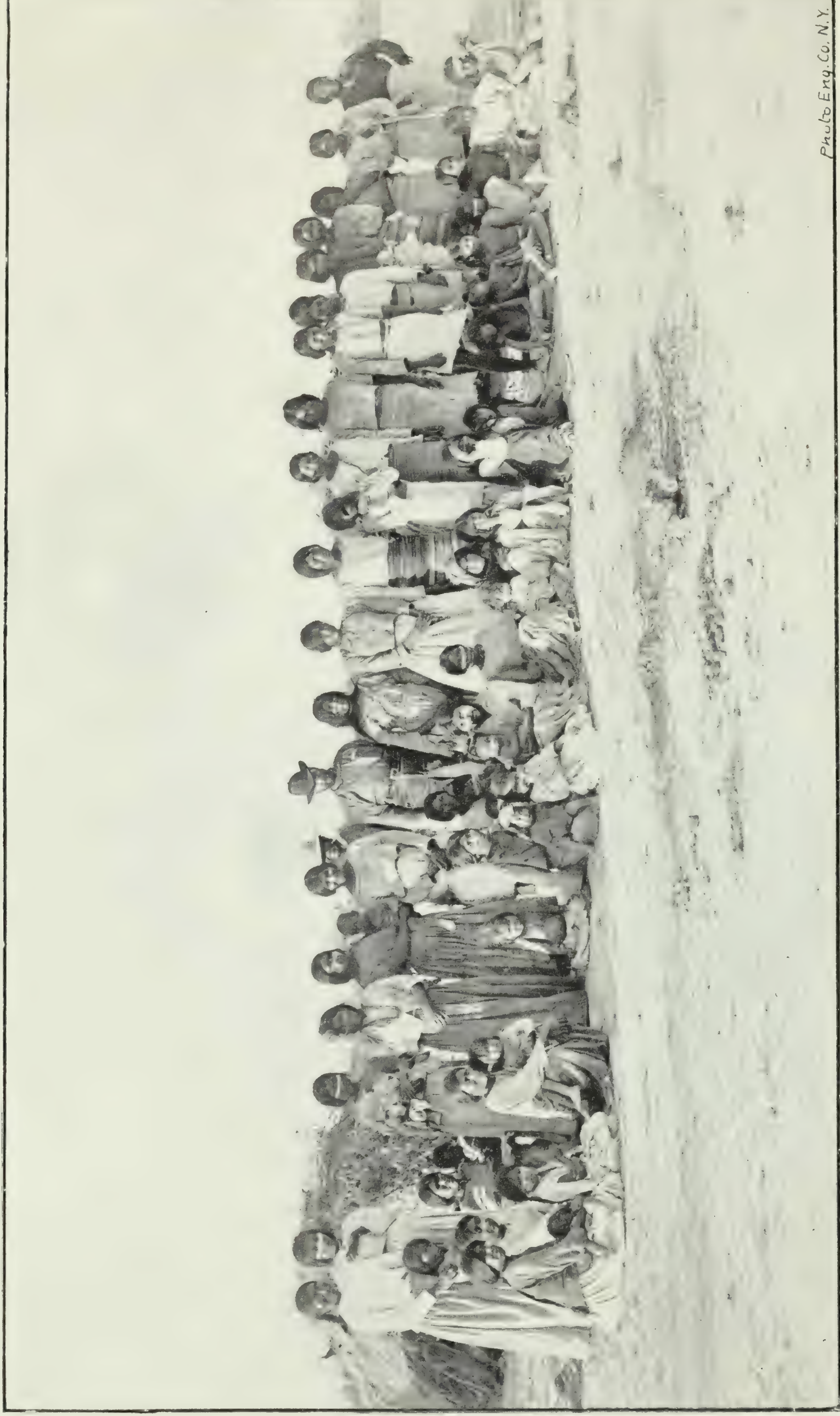


Photo Eng. Co. N.Y.

GROUP OF SERI INDIANS ON THE FRONTIER

6 feet 3 inches (1.90 meters); while for centuries the folk have been reputed a tribe of giants.

The estimation of Seri stature is diffilicated by the impossibility of defining maturity; and the effort to determine whether particular individuals were adult brought out clear indications of slowness in reaching complete maturity, i. e., of the continuation of somatic growth throughout an exceptionally long term in proportion to other stages in the life of the individual. Thus, with scarcely an exception, the polyparous matrons were taller than the mean of 5 feet 9 inches, while the apparently adult maidens (with one exception) and the younger wives were below this mean; and in like manner the stature of the warriors varied approximately with appearance of age, all of the younger men falling below the mean, and all of the older (except Mashém) rising above it. The difficulty of estimation is further increased by the absence of age records and the impracticability of ascertaining and standardizing the habitually guarded expressions for relative age implied in the kinship terminology; so that the age determinations were roughly relative merely, and there was no means of fixing the absolute age of maturity, of puberty, of marriage, or of the assumption of manhood and womanhood howsoever defined.

Under the conditions, the determination of stature-range in the Seri rancheria at Costa Rica in 1894 was not only difficult but uncertain; yet in general terms it may be said that the women having two or more children—about twenty in number—were notably uniform in stature, ranging from about 5 feet 7½ inches (in the case of an aged and shrunken elderwoman) to 5 feet 11 inches; that the younger women were more variable; and that the warriors (seventeen in number), of whom only a part were apparently heads of families, were more variable still, though the variation, apart from that apparently correlated with age, was less than is customarily found among the exceptionally uniform Papago, and decidedly less than that seen among the Yaqui or the local Mexicans.

The Seri skin-tint is of the usual Amerindian bronze, save that it is exceptionally dark, with a decided tone of black. Essayed representations of the characteristic color appear in plates XVIII and XXIV; but the essays are little more satisfactory than the innumerable attempts at depicting the skin-color of the American aborigines that have gone before. Experienced observers of the native tribes may form an impression of the Seri color from the explanation that they are as much darker than the neighboring Papago as the Papago are darker than the average tribesmen about the Great lakes; the Papago themselves being as much darker than the southern plains or Pueblo folk as these are darker than those of the Lake region. The range in color seems to be slight; the variation among the 60 individuals of both sexes and all ages seen at Costa Rica was hardly perceptible, being less than that usually observed in a single family of any neighboring tribe; while the

color distinction alone sufficed to distinguish the Seri from any other people at a glance.

Foremost among the general somatic distinctions between the Caucasian and the American native is the peripheral development of the former, displayed in better-muscled limbs, more expressive features, etc—i. e., the Caucasian body expresses a readily perceptible but difficultly describable peripherization, in contradistinction from the centralization displayed by the aboriginal body. Save in a single particular (the large feet and hands), the Seri exemplify this distinction in remarkable degree: their chests are strikingly broad, deep, and long, recalling the thoroughbred racer or greyhound; their waists are shortened by the chest development, yet are rather slender; their hips are broad and deep, with a clean-cut yet massive gluteal development; and, in comparison with the robust yet compact bodies, the tapering arms and legs seem incongruously slender.¹ This physical characteristic, like that of color, is insusceptible of quantitative expression, at least without much more refined observations than have been made; but its value may be indicated roughly by the statement that the Seri differs from the average aboriginal American in degree of somatic concentration as much as the average aborigine differs from the average Caucasian—though it is noteworthy that the departure in this direction from the aboriginal mean is in some measure regional (i. e., the Seri differ less in this respect from the Papago and other swift-footed natives than from the average tribesmen of the continent). The Seri robustness of body and slenderness of limb are brought out by the absence (in appearance at least) of adipose; the skin is strikingly firm and hard and evidently thick, yet the play of muscle and tendon beneath indicate a dearth of connective tissue and convey that impression of physical vigor which their familiars so miss in the photographs; and in no case, save perhaps in the young babe, could the slightest trace of obesity be discerned. Thus the Seri, male and female, young and old, may be described as notably deep-chested and clean-limbed quick-steppers, or as human thoroughbreds.

The somatic symmetry of the average Seri, marred somewhat by the slenderness of limb, is still more marred by the large extremities. The hand is broad and long, the fingers are relatively long as those of the Caucasian, the nails are peculiarly thick and strong, and the skin is so thick and calloused as to give a clumsy look to the entire organ; the feet are still larger and thicker-skinned, appearing disproportionately long and broad for even the heroic stature of the tallest warriors. The integument covering the feet, ankles, and lower legs is incredibly firm and hard, more resembling that of horse or camel than the ordinary human type;

¹ The photo-mechanical reproductions do but meager justice to the splendid chest development of the Seri, young and old; for they were not only at semisomnolent rest during the hotter hours at which photography was most feasible, but invariably quailed before the mysterious apparatus and crouched shrinkingly in such wise as to contract their chests and lose their habitually erect and expansive carriage.



PHOTO ENG CO N.Y.

SERI FAMILY GROUP

its astounding protective efficiency being attested by the readiness with which the Seri run through cactus thickets so thorny as to stop horses and dogs, or over conglomerated spall-beds so sharp that even the light coyote leaves their trail. In the absence of measurements it may merely be noted that the hands and feet of the Seri are materially larger, not only absolutely but relatively to their stature, than those of neighboring tribesmen or even of Mexican and American workmen. And, on the whole, it may be said that in their proportions, as in their stature and color, the Seri are strikingly uniform, their range being less than that commonly observed in contemporary tribes, and the differences between them and their neighbors much exceeding the range among themselves.

Somatically distinctive as is the Seri at rest, he (or she) is much more so in motion—though the characteristics so readily caught by the eye are not easily analyzed and described. Perhaps the most conspicuous element in their walk is a peculiarly quick knee movement, bringing the foot upward and forward at the end of the stride; this merges into an equally quick thrust of the foot forward and downward, with toe well advanced, toward the beginning of the next stride; and these motions combine to produce a singular erectness and steadiness of carriage, the body moving in a nearly direct line with a minimum of lateral swaying or vertical oscillation, while the legs neither drag nor swing, but spurn the ground in successive strokes. Thus the walk seems notably easy and graceful, while the walker carries an air of alertness and reserve power, as if able to stop short at any point of a pace or to bolt forward or backward or sidewise with equal facility; he simulates the “collected” animal whose feet tap the ground lightly and swiftly while his body appears to yield freely to voluntary impulse. In this deer-like or antelope-like movement all the Seri are much alike, and all are decidedly removed from their neighbors, even the light-footed Papago. The component motions are most conspicuous in leisurely walking, though the resultant movement is more striking in rapid walk or the incredibly swift run of youths and adults. The general movement is akin to that shaped by the habit of carrying burdens balanced on the head, as the Seri women actually carry their water ollas for astonishing distances; but the carriage is shared—indeed, best displayed—by the warriors and growing boys, who are not known to carry water in this way.

Among the conspicuous but nondistinctive somatic characters of the Seri is luxuriant straight hair, habitually worn long and loose. Commonly the hair is jet-black for most of the length, growing tawny toward the tips; sometimes it is black throughout, while again the tawny tinge, or perhaps a bleached appearance, extends well toward the scalp. Age-grayness seems not to be characteristic; the most aged matrons known have no more than a few inconspicuous and scattered gray hairs, though the pelage of some is slightly bleached or faded. None of the warriors at Costa Rica showed the slightest grayness except

Mashém (aged about 50 years), who had a few gray strands about the temples; but it may be significant that the hair of the tribal outlaw Kolusio, who has lived with white men for full three score years, is iron-gray. Kolusio's pelage is trimmed in Caucasian fashion; that of Mashém is cut off mid-length in a manner exciting comment, if not derision, on the part of his fellows and others, and resulting in his (Spanish) sobriquet, *Pelado* (literally, Peeled, or idiomatically, Shorn); but with few exceptions the hair is kept long as it can be made to grow, and receives careful attention to this end. Naturally the length is somewhat variable; in many cases it depends to or slightly below the waist, while in other cases it merely sweeps the shoulders; and in general it appears to increase in both length and luxuriance not only throughout adolescence, but up to late maturity, for the best pelages are presented by moderately aged persons, while none of the youths are so luxuriantly tressed as their elders. Not the slightest trace of baldness appears. The infantile pelage is short, brownish in color, soft or even silky, and inclined to curl toward the tips. It is not until the age of several months that the hair begins to acquire the adult character, and at least some children retain traces of the infantile pilary character up to 5 or even 10 years; and none of the children display such jet-black shock-heads as are frequently found among other tribes, whose adult pelage may nevertheless be much less luxuriant than that of the Seri. On the whole, it may be said that the Seri hair is luxuriant and vigorous beyond the aboriginal average, and that it, like various other somatic features, indicates a relatively late maturation in the life-history of the individual.

Both sexes are beardless. The female faces seen were entirely free of strong pilary growth; one or two of the warrior faces showed scattering hairs, and Mashém sported a feeble and downy but jet-black mustache with an exceptional number of scattered hairs about the chin; while Kolusio shaved regularly, and might, apparently, have grown moderately stiff but straggling mustaches and beard. Axillary hair seems to be wanting; pubic hair is said to be scanty; otherwise the bodies are practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as large; they close with the upper incisors projecting slightly beyond the lower denture in the usual manner.

The skeletal characteristics of the Seri are known only from a single specimen obtained in the course of the 1895 expedition in such manner as to establish the identification beyond shadow of question. This skeleton was submitted to Dr Aleš Hrdlička for measurement and discussion.¹

In making his examination, Dr Hrdlička compared the unquestion-

¹A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in verification of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

ably authentic cranium of the entire skeleton with two skulls preserved in the American Museum of Natural History, viz, No. 99/84, designated as a skull of a Tiburon mound-builder, and No. 99/85, labeled as having

the complete skeleton. Subsequently this specimen also was put in Dr Hrdlička's hands (at his request), and was kindly examined, with the results recorded in the following letter:

MARCH 29, 1900.

Professor W J MCGEE,

Bureau of American Ethnology, Washington, D. C.

DEAR SIR: The skull which you submitted to me for examination shows the following:

The skull is that of a male between 40 and 50 years of age. The facial parts and a portion of the left temporal bone are wanting; otherwise the specimen shows nothing pathologic. There are signs that the skull belonged to a very muscular individual. The occipital depressions, ridges, and protuberance are very marked, and the temporal ridges approach to within 1.7 cm. on the left and 2.3 cm. on the right of the sagittal suture. The whole skull is rather heavy and massive; thickness of parietal bones 4-8 mm.

The shape of the skull is unusual. The frontal region is rather broad (frontal diameter, minimum, 9.7; frontal diameter, maximum, 12.1 cm.), but quite flat and sloping. Frontal ridges wanting (broken away).

The sagittal region is elevated into a crest which begins 4 cm. posteriorly from the bregma, is most marked at the vertex, and proceeds in two tapering diverging crura to the lambdoid suture. The whole vertex region is considerably elevated and forms a blunt cone, which is particularly noticeable when the skull is viewed from the side.

The temporo-parietal regions are moderately convex and expanded anteriorly, but become flattened and gradually narrow toward the parietal bosses. The parietal bones measure each 11 cm. along the coronal, but only 8.8 cm. along the lambdoid suture. The gradual tapering of the parietal regions from their middle backward continues on the occipital bone up to theinion, and gives the norma verticalis of the skull a peculiar appearance.

The occipital region, as a whole, does not protrude much, as in true dolichocephals, but it shows a prominent broad crest, formed by the two superior semicircular lines and the region between them. The extreme occipital protuberance is pronounced and shows signs of strong muscular attachments. A small distance above the foramen magnum, on each side of the median line, is a very marked depression, surmounted by a dull ridge.

Of the mastoids, the right has been broken off and the left is damaged, but they do not seem to have been of extraordinary size.

The base of the skull is fairly well preserved and shows the following characters: The basilar process and the petrous portions of the temporal bones are more massive than usual. The glenoid fossæ are broad and of fair depth. The styloids are quite diminutive (right 0.7, left 0.5 cm. long). The foramen magnum is hexagonal in outline; it is 4.4 cm. long, 3.4 cm. wide; its plane is inclined backwards in such a way that its antero-posterior diameter prolonged would touch about the lower borders of the nasal aperture.

The cranial cavity can be well inspected through the opening caused by injury. The internal surface of the frontal bone shows but very few traces of brain impressions. There are several large impressions on each parietal bone, and deep, though rather small, fossæ for the extremities of the occipital lobes on the occipital bone. The superior border of the dorsum sellæ shows in the middle a rounded notch about 3 mm. deep.

The serration of the sutures is throughout very simple.

Measures—The glabello-occipital length and maximum width of the skull can not be accurately determined on account of injuries to the bones. They amount, respectively, to about 18.8 and 14 cm., giving the cephalic index of about 74.4 (moderate dolichocephaly). The basion-bregma height is 14.1 cm.; basion-vertex, 14.8 cm.; basion-obelion, 13.6 cm.; basion-lambda, 12.2 cm. The two more anterior of these measures characterize the skull as a rather high one. The two more posterior measures show the rapid downward slope of the posterior half of the sagittal region. The maximum circumference of the skull (above the ridges) is 52 cm.

The bregma-lambda arc measures 13.3, the lambda-opisthion arc 12.2 cm. Diameter between the asterions = 10.7 cm.

If the skull under examination is considered from a purely evolutionary standpoint, it must be pronounced to be in many points inferior to the average white and even to the majority of Indian crania. An anthropological identification of the specimen is difficult, for the reason that we are still very imperfectly acquainted with the craniology of the peoples of southwestern United States and northern Mexico. From what we know of the crania of the Pima, and the extinct Santa Barbara, Santa Catalina, etc, Californians, it is possible to say that the individual whose skull is here reported upon may have belonged to a people physically related to either of these groups. The skull is very distinct from that of an Apache. The female Seri cranium examined by me before does not show certain of the peculiarities of this specimen; nevertheless it is very possible that both crania belonged to individuals of the same tribe.

ALEŠ HRDLIČKA.

been found in a shell mound at Tiburon, California; but, in view of the possible error in identification in these cases, the comparisons are omitted. Otherwise, Dr Hrdlička's determinations are as recorded in the following report (and his drawings of the anterior and left lateral aspects of the cranium are reproduced in figure 6):

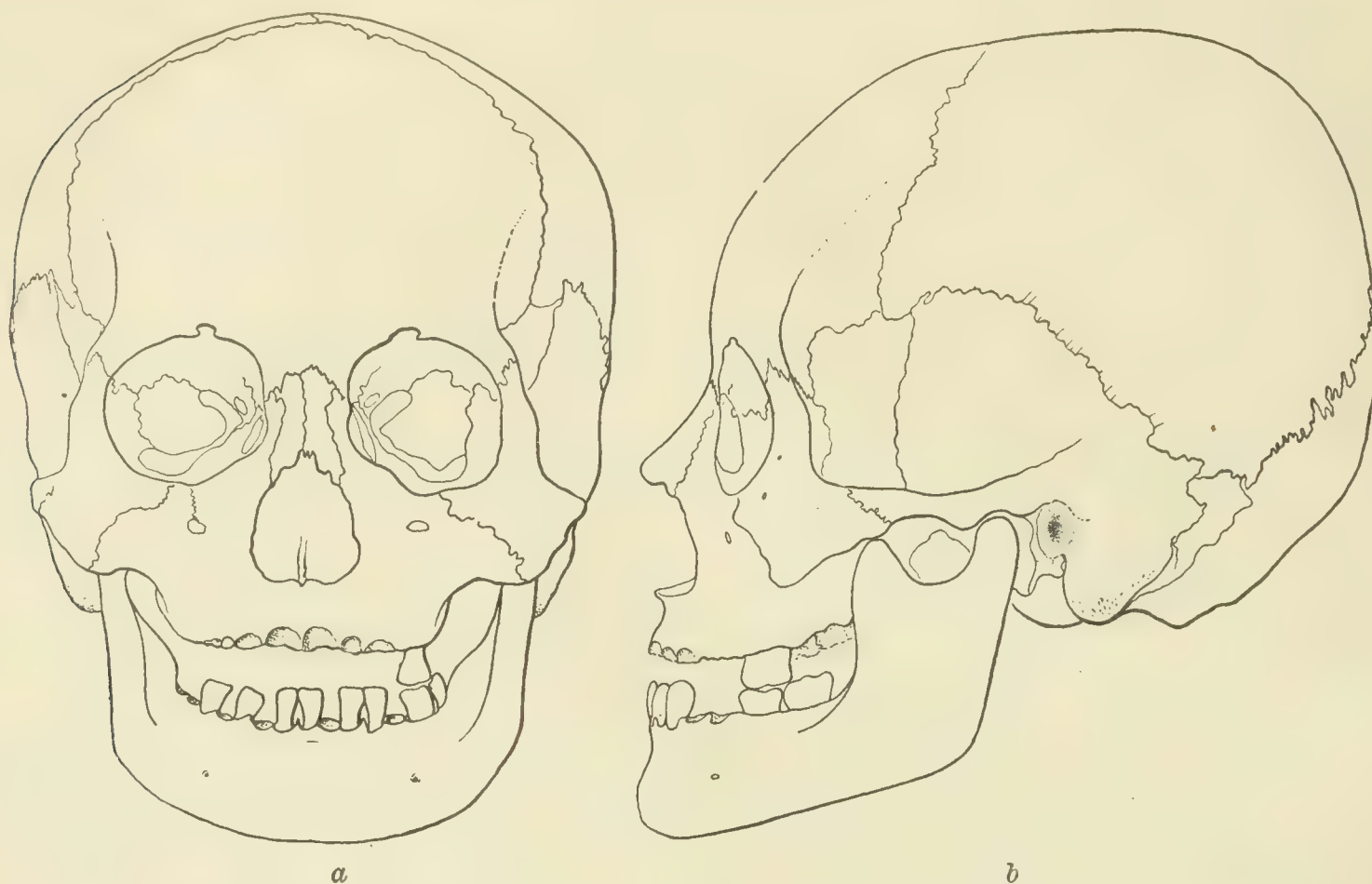


FIG. 6—Anterior and left lateral aspects of Seri cranium.

REPORT ON AN EXAMINATION OF A SKELETON FROM SERILAND

[By Dr ALEŠ HRDLIČKA, Associate in Anthropology, Pathological Institute, New York]

The Skeleton

All the bones of the skeleton are present, except the sternum, the coccyx, a few of the teeth, and a few of the small bones of the extremities.

It is a skeleton of a young adult, between 20 and 24 years of age, female. The age of the subject is indicated mainly by the unattached epiphyses of the long and some of the short bones, those epiphyses, namely, which are the last to coossify. The femininity of the subject is indicated by the generally slightly marked ridges, etc., of muscular attachment, and by the decidedly feminine character of the pelvis (light, well-spread ilia, broad subpubic arch) and of the skull (lack of supraorbital ridges, thin dental arches, small mastoids, etc).

There are no wounds or pathological conditions noticeable on the skeleton. Several peculiarities and anomalies are observable. They will be described with the parts they concern.

The measurements to follow are expressed in centimeters. The French anthropometric methods and nomenclature have been adopted.

The Skull

The skull is of fair size, and is symmetrical throughout, with the exception of a slight irregularity in the occipital region. All the sutures, with the exception of the basilar, open; nerve foramina all large; serrations rather simple; no intercalate bones of any kind.

Norma frontalis—Visage symmetrical. Forehead well arched, medium height.



SERI MOTHER AND CHILD

Supraorbital ridges almost absent; glabella convex. Nasion depression medium. Orbits obliquely quadrilateral; their axes (internal inferior corner—internal superior corner) meet at ophryon. Spheno-maxillary fissure, lachrymal canal, and nerve foramina all above average in size. Nasal bones well bridged, very slightly concave; nasal aperture regular; no “gouttières”; turbinated bones well formed; septum wanting; spine 0.65 long, bifid at the end. Zygomæ of medium size and strength. Superior maxilla of medium size, well formed. Dental arches regular; no prognathism. Bone of lower jaw moderately strong; does not protrude anteriorly; conformation normal.

Norma basalis—Contour almost round. Whole base symmetrical, except as noted below; the middle structures appear shortened antero-posteriorly, slightly more on the left than on the right; basilo-vomeric angle rather acute (100°); foramina of the base all spacious; the petrobasilar suture is large (average diameter, 5 mm.) and is throughout pervious. Superior dental arch regular and of medium thickness. Dentition incomplete—right upper wisdom tooth not fully erupted; left lower wisdom tooth wanting entirely. Denture fine and regular; no teeth decayed. Both upper first incisors absent.¹ Teeth set regularly in socket and of medium size. Palatine arch symmetrical. Shape of palate normal. Posterior nasal foramina oblong. Styloids small, shell-like, flattened.

Norma occipitalis—The posterior part of the skull is somewhat flattened. The sides of the surface present a pentagonal outline with rounded corners, the apex corresponding to the sagittal suture, or obelion. There is a slight asymmetry, the right side being somewhat flattened. Exterior occipital protuberance not well marked.

Norma verticalis—Outline an irregular ovoid, wider posteriorly and more prominent on the left and posteriorly. Slight symmetrical depression of the parietals, beginning about 1 cm. and ending 5 or 6 cm. behind the coronal suture and extending laterally from the sagittal suture to the upper temporal ridge.

Norma lateralis—Outline ovoid, larger posteriorly. Pterions en H, of medium breadth. Temporal ridges not very distinct. Parietal bosses prominent.

	cc.
Skull capacity, Broca's method.....	1,545
Skull capacity, Flower's method	1,490
Antero-posterior diameter, maximum	16.3
Lateral diameter, maximum.....	14.4
Cephalic index, 88.3=Brachycephalic. ²	
Chin-bregma	21.2
Chin-ophryon.....	13.2
Alveolar point-ophryon	8.6
Bizygomatic breadth, maximum	13.0
Facial index.....	98.5
Superior facial index (Broca's), 66.1=Mesoseme.	
Height of nose aperture	5.4
Breadth of nose aperture	2.65
Nasal index, 49.0=Mesorhine.	
Mean height of orbits	3.80
Mean breadth of orbits.....	3.95

¹ Both these incisors were apparently lost at the same time, not from general lesion, and some years previous to the death of the individual, as the sockets appear exactly alike, bear no signs of violence, and are almost filled up with cancellous tissue (some religious or social rite?).

² If allowance is made for the effects of flattening of the occipital on the long diameter, and hence on the index, of a skull, it becomes apparent that the true index of this skull is probably of a low brachycephalic, or, at most, of mesocephalic order. It is very doubtful if the deformity is intentional; its moderate extent and the total lack of signs of counter-compression would indicate with more probability that the deformity might have been produced by the individual lying, when an infant, by compulsion or habit, on something hard, probably a board.

Orbital index, 96.2=Megaseme.	cc.
Mean depth of orbits	4.6
Dacryon to dacryon	2.3
Frontal diameter, minimum	9.2
Frontal diameter, maximum (interstephanic)	11.4
Biauricular diameter ¹	12.3
Diameter through parietal bosses	14.3
Bimastoid diameter	10.55
Distance from superior alveolar arch to inferior occipital ridge	14.35
Distance between supramastoid eminences	13.9
Length of basilar process (notch of vomer to basion)	2.95
Basion-bregma height	13.45
Basion-obelion height	? (obelion indistinct.)
Basion-ophryon	14.0
Basion-inion	8.1
Circumference, maximum	49.4
Nasion-ophryon arc	1.8
Nasion-bregma arc	12.3
Nasion-inion arc	30.0
Nasion-opisthion arc	35.5
Pterion-bregma arc	11.2
Arc external meatuses, over forehead	29.2
Arc external meatuses, over frontal bosses	30.4
Arc external meatuses, over bregma	34.0
Arc external meatuses, maximum	35.7
Arc external meatuses, over inion	23.6
Temporal ridges to sagittal suture (stephanions-bregma), (arc) mean	7.5
Lateral diameter of foramen magnum, maximum	2.75
Antero-posterior diameter of foramen magnum, maximum	3.60
Index of foramen magnum	76.4
Length of hard palate, maximum	4.6
Height of hard palate at first molars	1.55
Breadth of hard palate at first bicuspids	2.9
Breadth of hard palate at first molars	3.55
Breadth of hard palate at third molars	4.1
Height of posterior nares	3.1
Breadth of posterior nares	2.55
Index of posterior nares	82.2
Angle of mandibles	114°
Length of mandibular rami	9.55
Bigoniac diameter of mandibles	9.85

The Vertebral Column

Cervical vertebrae—Number complete; characters normal. All cervical spinous processes bifid; vertebra prominens well defined. All epiphyses absent.

Transverse diameter of third cervical vertebra (between posterior tubercles of the pedicles), maximum	cc. 5.05
Antero-posterior diameter of third cervical vertebra (body- spinous process), maximum	4.20
Greatest lateral diameter of foramen, same vertebra	2.15

¹ The "biauricular" signifies the distance between points of the skull immediately above the commencement of the superior zygomatic border on the temporal.



GROUP OF SERI BOYS

Greatest antero-posterior diameter of foramen, same vertebra	1.45
Height of body in center, same vertebra .....	.90

Dorsal vertebræ—Number complete; characters absolutely normal. Resemblance to lumbar processes begins with tenth dorsal vertebra; a number of the epiphyses of the various processes either imperfectly united or detached; body epiphyses absent.

Antero-posterior diameter of body of sixth dorsal vertebra, maximum	2.55
Lateral diameter of body of sixth dorsal vertebra, maximum	2.90
Height of body in center	1.67
Separation of transverse processes	5.63
Edge of upper articular processes—tip of spinous processes	5.50
Breadth of foramen, maximum	1.60
Length of foramen, maximum	1.50

Lumbar vertebræ—Number complete; characters absolutely normal. Only disk epiphyses detached.

Antero-posterior diameter of body, maximum	3.12
Antero-posterior diameter of whole vertebræ, maximum ..	7.10
Lateral diameter of body, maximum	4.55
Lateral diameter of transverse processes, maximum	7.10
Height of articular processes, maximum	4.33
Height of body in center, maximum	2.20
Antero-posterior diameter of canal, maximum	1.50
Lateral diameter of canal, maximum	2.10

The Sacrum

Aspect normal with the following exception: There are distinct intervertebral disks between the different segments (5 segments); there are deep lateral incisures in places where the lateral processes unite, and the fourth and fifth segments are entirely separated (in one piece) from the upper three (four small spots of coossification along the posterior border of the articulation are visible). The articular processes of the first and second sacral segments are similar in form to the lumbar, and form open articulations. There is a large foramen situated below the spinous processes of the first and third segment, and a smaller beneath the second. Coccyx absent. Curvature medium.

Breadth of the sacrum, maximum	10.5
Height of the sacrum, maximum	11.2
Index of the sacrum	93.7

The Thoracic Cage

Aspect of ribs normal. Strength medium. Sternum absent.

Length second right rib (arc)	21.8
Long diameter second right rib	12.5
Maximum height of the curve	7.2
Length ninth right rib (arc)	28.8
Long diameter ninth right rib	18.7
Maximum height of curve	8.45

Bones of the Upper Limbs

Clavicles—Form normal, slender; epiphyses united. Length, maximum, 13.5. Muscular attachments of slight prominence.

Scapulæ—Form normal, spine directed somewhat more upward than is usual; whole bone light and slender; acromial epiphyses absent.

Height (middle of glenoid fossa-tip of inferior angle)..... 12.0

Breadth (middle of glenoid point, maximum) 8.7

Humeri—Form normal; bone slender; head-epiphyses not united; left head perforated by large oval foramen from coronoid to olecranon fossa (8 mm. by $4\frac{1}{2}$ mm.)

Length of left humerus (with epiphysis)..... 31.3

Length of right humerus (with epiphysis) 31.0

Ulnæ and radii—Form normal; bones slender; lower epiphyses ununited.

Length of left radius (head and end of styloid) 24.1

Length of left ulna (olecranon-styloid) 25.8

Metacarpus, carpus, and phalanges—Nothing special.

Bones of the Pelvis and Lower Limbs

All the bones of the pelvis and lower limbs of normal shape and medium size. Pelvis apparently that of a female (subpubic angle 100°). Bones well united, all traces of the union in acetabulum effaced. Epiphyses ununited except on the ischiatic protuberances, where bony union just begins. Above the fossa acetabuli (8 mm. postero-superiorly from the uppermost edge of the fossa) there is in both acetabula an irregularly triangular depression of about 2 water-drops capacity (accessory tendon?).

Anterior to posterior-superior spine 13.7

Point of pubis to posterior-superior spine..... 15.8

Point of pubis to anterior-superior spine..... 12.7

Point of pubis to point of ischium..... 10.8

Biiliac diameter of whole bony pelvis (between internal iliac borders), maximum 21.0

Height of coxal bones (tuberosity of ischium to iliac border in this case without its epiphyses), maximum..... 19.4

Antero-posterior diameter of superior strait..... 11.8

Lateral diameter of superior strait 11.4

Oblique diameter of superior strait 11.3

Height of subject (determined after Manouvrier's method) about 1.620 m. (above the general average).

Femurs—Lower epiphyses ununited. Muscular attachments, including lineæ aspera, but little prominent.

Length of femurs (both condyles applied to base)..... 43.6

Inclination of neck to shaft 130°

Tibiæ—Both platycnemic. All the epiphyses ununited, especially the upper.

Antero-posterior diameter at center, maximum..... 2.5

Lateral diameter at center, maximum..... 1.62

Length (articular surface-tip of styloid) 35.6

$$\text{Femoro-tibial index } \left\{ \frac{\text{length of tibia} \times 100}{\text{length of femora}} \right\} = 82.0$$

This index is 81 in the European, 83 in the negro, and 86 in the Bushman.¹

Fibulæ—Length, 35.2. Epiphyses not yet united, particularly the upper.

Tarsal, metatarsal, and phalangeal bones—Nothing special.

¹ Quain, Anatomy, 1893: Osteology, p. 127.



MASHEM, SERI INTERPRETER

Résumé of the Peculiarities of the Skeleton

The nerve and blood-vessel foramina are generally large. This character and the platynemic tibiæ indicate an ample musculature of the subject.

The height is above the general average for a woman, which, according to Topinard, is 1.53.

The petro-basilar fissures are large and visibly pervious. This condition is found occasionally; significance doubtful; it is more frequent in young subjects.

Platynemic tibiæ—This is considered a simian character.¹ It was found first by Broca in 1868² on bones from Eyzies; it is associated with relative strength of the muscles of the leg; is very frequent among the characters found on bones from the epoch of polished stone in Europe.³ J. Wyman found this character more accentuated than at Cro-Magnon or at Gibraltar on a third of the tibias from the mounds of the United States.³

Perforated humerus—Noticed first by Desmoulins, 1826, on the humeri of Guanches and Hottentots;⁴ occurs with greatest frequency in the following peoples:⁵

	Per cent.
156 neolithic humeri from around Paris.....	21.8
97 humeri of African negroes.....	21.7
122 humeri of Guanches.....	25.6
80 humeri from the mounds of United States (J. Wyman) ..	31.2
32 humeri of Polynesians.....	34.3
30 humeri of altaic and American races.....	36.2

Summarily, Dr Hrdlička's special determinations conform with the external observations on the Seri body; they indicate an exceptionally large stature, together with a notably well-developed and well-proportioned osseous framework, of the native American type, yet significantly approaching the Caucasian in several respects. It is especially noteworthy that the cranium is well formed and capacious, the precise measurements corroborating the external observation that the Seri head is of good absolute size, though relatively smaller (in comparison with height and weight) than that of some neighboring tribes of less stature—e. g., the Papago. It may be noted, too, that the imperfect ankylosis of the epiphyses, and various other skeletal features, are in accord with the inferences from the living body as to the slowness of attaining maturity. It may be noted further that the extraordinary development of the muscular attachments, especially in the masculine cranium, is quite in harmony with the habits of the tribe.

The remaining somatic characteristics of the Seri are for the greater part of such sort as to be described by generalities and negatives. In general they correspond with those of typical American tribesmen and other peoples; and they do not exhibit striking peculiarities in proportion or structure. In the opposability of the thumb, the nonopposability of the hallux, and the independence of fingers and toes, the Seri hands and feet are developed quite up to, if not somewhat beyond, the

¹ Hovelacque et Hervé, *Précis d'Anthropologie*, 1887, pp. 112, 2937.

² *Bulletin de la Société d'Anthropologie*, 1868.

³ Hovelacque et Hervé, *op. cit.*, p. 113.

⁴ *Histoire Naturelle des Races Humaines*, 1826, p. 304.

⁵ Hovelacque et Hervé, *op. cit.*, p. 291.

Amerindian¹ average; the feet are set straight in walking, as befits the pedestrian habit; the arms are not elongated, and the thighs seem no longer in proportion to other elements of the stature than are those of the highest human types. In like manner the bodies are notably free from artificial deformation; the skulls are not flattened or otherwise distorted; there is no scarification, or even tattooing; neither ears nor lips are pierced for pendants or labrets; the teeth are not filed or drilled, though in some cases at least the first incisors of females are extracted; and while there are trustworthy records of the piercing of the nasal septum for the insertion of pendants, no examples were found at Costa Rica in 1894. The food habits and other customs of the tribe indicate, or at least suggest, more or less specialized and perhaps distinctive internal characters; but, without actual examination of the organs, these inferred characters demand little more than passing notice.

On reviewing the more prominent somatic characters of the Seri, it is found that the greater number are either functional or presumptively correlated with function, and that only a few—chiefly stature and color—are simply structural; accordingly a comparison of the peculiar somatic features and the peculiar individual habits of the tribe would seem to be instructive in more than ordinary degree.

The most striking trait of the Seri is the pedestrian habit. The warriors and women and children alike are habitual rovers; their jacales and even their largest rancherias are only temporary domiciles, evidently vacant oftener than occupied; the principal rancherias are separated by a hard day's journey or more; and none of the known rancherias or jacales of more persistent use are nearer than 4 to 10 miles from the fresh water by which their occupants are supplied. Probably the most persistently occupied rancherias of the last half century have been those located from time to time near Costa Rica, yet even these were seldom occupied by the same group for more than a fortnight or possibly a month, and were often vacated within a day or two after erection. Still more temporary camps intervene between jacales, and their sites may be seen in numbers in the neighborhood of the better-beaten paths, or along the shores, or even over the trackless spall-strewn plains; they may be merely trampled spots, sparsely strewn with oyster shells and large bones gnawed at the ends, usually in the lee of a shrub or rock; in places of small shrubbery or exceptionally abundant grass there may be two or three or perhaps half a dozen "forms" (suggesting the temporary resting places of rabbits), in which robust bodies nestled and shrugged themselves into the warm earth and under the meager vegetation. Rarely there are ashes and cinders hard by, to mark the site of a tiny fire, and more frequently battered and stained or greasy boulders record their own use as meat-

¹ The term *Amerind* (with the self-explanatory mutations *Amerindian*, *Amerindize*, etc.) has been established by the Anthropological Society of Washington as a convenient collective designation for the aboriginal American tribes (*American Anthropologist*, new series, vol. 1, 1899, p. 582).

blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions.

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow.

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, “rounded up” a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol-

lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana Maria) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa



"JUANA MARIA," SERI ELDERWOMAN

Rica) noted for his prowess in hunting. One hot afternoon he begged relief from his tasks, saying the spirit of catching a deer had hold on him; and he was excused on condition that the deer be brought entire to the rancho. Two hours later he was seen driving in a full-grown buck; on approaching the rancho the terrified animal turned this way and that, describing long arcs in wild efforts to avoid the human habitation; yet the hunter kept beyond it, heading it off at every turn and gradually working it nearer, until, at a sudden turn, he was able to rush on it; whereupon he caught it, threw it over his shoulders, and ran in to the rancho with the animal still struggling and kicking off its overheated hoofs.

Señor Encinas himself, with Don Andrés Noriega and several other attachés, vouch for the catching of a horse by a Seri hunter in still more expeditious fashion: one of the horses belonging to the rancho was exceptionally fat, and hence exceptionally tempting to the Seri band (and at the same time worthless to the vaqueros); the chief begged for it persistently until, wearied by his importunities, the rancho offered the horse to the band on condition that a single one of them should catch it within a fixed distance (about 200 yards) from the gateway of the corral—and the offer was promptly accepted. With the view of making the test of fleetness fair, a vaquero was called in to frighten the horse and start him running around the interior of the corral, while a boy stood by to drop the bars at the proper moment, the Indian standing ready outside the gateway; when the animal had gained its best speed the bars were dropped and it bolted for the open plains—but before the 200-yard limit was reached the hunter had overtaken it, leaped on its withers, caught it by the jaw in one hand and the foretop in the other, and thereby thrown it in such manner as to break its neck. Knowing of these and other instances, L. K. Thompson, of Hermosillo, undertook arrangements for publicly exhibiting Seri runners as deer catchers at different expositions during the nineties; but his arrangements failed, chiefly because of the anticipated (and probably underestimated) difficulty of taming the Seri sufficiently for the purpose.

About 1893, Señor Encinas and several attendants left Costa Rica one morning for Hermosillo, leaving at the rancho, among others, a Seri matron with a sick child nearly a year old; in the evening (as they learned later) the child was worse, and the matron took the trail about dusk, in the hope of finding a cure in the white man's touch or other medicine—and at dawn next morning she was at Molino del Encinas, 17 leagues (nearly 45 miles) away, with her helpless child and a peace offering in the form of a hare, which she had run down and caught in the course of the journey. And the matrons, with children astride their hips and water-filled ollas balanced on their heads, and all their goods and chattels piled on their backs, habitually traverse Desierto Encinas from the sea to Costa Rica (some 30 miles), or from Costa Rica to the sea, in a night.

Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and protolithic mullers or hammers are found in numbers in their hands, on their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowpoints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of barter between the Seri and the Sonorenses through which the savages acquired aguardiente, manta, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for any other customary purpose. Among the supplies laid on top of the jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf¹ shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin-bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

¹ Defined postea, p. 188.

rubbing face-paint, for bruising woody tissue to aid in breaking okatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with molluscan shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri outpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by



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TYPICAL SERI WARRIOR

their rigorously maintained purity of blood; it is manifested in their commonplace conduct by a singular combination of hauteur and servility, forbidding association with aliens on terms of equality. The entire group at Costa Rica in 1894 were on good behavior, partly, no doubt, for profit, partly because they were at peace bought by bloodshed; yet they kept an impassable gulf between themselves and the Caucasians, and a still wider chasm against the Papago and Yaqui. They came to the tanque, usually in groups, rarely alone, always alert; especially when alone or in twos or threes, they moved slowly and stealthily in their peculiar collected and up-stepping gait, often stopping, always glancing furtively with roving eyes, and bearing a curious air of self-repression—as of the camp-prowling coyote who seems to hold down his instinctively bristling mane by voluntary effort. And the visitor to their rancheria sent a wave of influence before as his approach was noted; laughter ceased, languor disappeared, and a forced, yet sullen, amiability took their place, though the children and females edged away; if he appeared unexpectedly or came too close, the children and younger adults simply flitted like young partridges, while the elders stiffened rigidly, with bristling brows and everting lips and purpling eyes, perhaps accompanied by harsh gutturization—indeed the curiously canine snarl and growl, often evoked by the stranger unintentionally, betrayed the bitterness of Seri antipathy toward even the most tolerable aliens. Every human is panoplied in a personality, perhaps intangible but none the less real, which repels undue approach and fixes limits to familiarity on the part of strangers, friends, kinsmen, and mates, according to their respective degrees of mutually elective affinity; but the Seri are so close to each other and so far from all others that they are collectively panoplied against extra-tribal personalities even as are antipathetic animals against each other—and the Seri can no more control the involuntary snarl and growl at the approach of the alien than can the hunting-dog at sight or smell of the timber-wolf.

While the highly developed traits represented by pedestrian habit and hand-and-tooth habit and segregative habit expressing race-sense are conspicuous during exercise, each carries an equally well-marked obverse. Thus, while the Seri are known as runners par excellence in a region of runners, and were named by aboriginal neighbors from their spryness of movement, they have been no less notorious among the Caucasian settlers of two generations for unparalleled laziness—for a lethargic sloth beyond that of sluggish ox and somnolent swine, which was an irritating marvel to the patient padres of the eighteenth century, and is today a byword in the even-tempered Land of Mañana; concordantly the sinewy hands and muscular jaws are noticeably inert during the intervals between intense functionings, are practically free from the spontaneous or nervous movements of habitually busy persons, and contribute by their immobility to the air of indolence or languor which

so impressed padres and rancheros; concordantly also, the manifestations of race hate, doubtless culminating among warriors on the war-path, are strongly contrasted with the abject docility of the Seri groups when at peace and in camp near Costa Rica and other ranchos—a docility far exceeding that of the Papago, whose personal dignity is an ever-present possession, or that of Yaqui, whose strong spirit so often breaks the curb of Caucasian control. So the observer of the Seri is impressed by the intensity of functioning along lines defined by their characteristic traits, and equally by the capriciousness of the functioning and the remarkably wide range between activity and inactivity which render them aggregations of extremes—the Seri are at once the swiftest and the laziest, the strongest and the most inert, the most warlike and the most docile of tribesmen; and their transitions from rôle to rôle are singularly capricious and sudden. At the same time the observer is impressed by the relatively long intervals between the periods of activity; true, the intense activity may cover hours, as in the chase of a deer, or days, as in a distant predatory raid, or perhaps even weeks, when the tribe is on the warpath; yet all the known facts indicate that far the greater portion of the time of warriors, women, and children is spent in idle lounging about rancherias and camps, in lolling and slumbering in the sun by day and in huddling under the scanty shelter of jacales or shrubbery by night—i. e., when their activity is measured by hours, their intervals of repose must be measured by days.

Summarizing those somatic traits connected with habitual functioning, the Seri may be considered as characterized by (1) distinctive pedestrian habit, (2) conspicuous hand-and-tooth habit correlated with defective tool-sense, and (3) pronounced segregative habit correlated with a highly specialized race-sense; yet they are characterized no less by extreme alternations from the most intense functioning to complete quiescence—the periods of intensity being relatively short, and the intervals of quiescence notably long.

On reviewing the more conspicuous somatic structures and functions jointly, they are found to throw some light on their own development, and hence on the natural history of the Seri tribe.

Certain characteristics of the tribe strongly suggest lowly condition, i. e., a condition approaching that of lower animals, especially of carnivorous type; among these are the specific color, the centripetally developed body, the tardy adolescence, the defective tool-sense, the distinctive food habits (especially the consumption of raw offal and carrion), the independence of fixed habitations, and the extreme alternations between the rage of chase and war and the quiescence of sluggish repose. But these primitive characteristics are opposed or qualified by such features as the noble stature, the capacious and shapely brain-case, the well-developed hands, and the considerable intelligence revealed in native shrewdness as well as in organization and belief. Collectively the characteristics are in some measure incongruous; yet



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TYPICAL SERI MATRON

all are at least fairly compatible with the inference that the tribe is exceptionally (if not incomparably) low in the scale of general human development, yet at the same time highly specialized along certain lines; and the inference in turn is corroborated by the coincidence between the special lines of development and the peculiar conditions of environment characterizing the habitat of the tribe.

A striking correspondence between Seri physique and Seri habitat is revealed in the pedal development, with the attendant development of muscle and bone, lung capacity, and heart power, together with other faculties involved in the pedestrian habit. Seriland is a hard and inhospitable home; sea-food is indeed abundant and easily taken, but water is terribly—often fatally—scarce, and obtainable only by distant journeying from the places of easy food supply; moreover, the monotony of the diet is alleviable only by extensive wandering for the collection of vegetal products or severe chase after land animals; while the warlike spirit, apparently inherited from a still less humane ancestry and fostered by the geographic isolation, combines to keep the tribe afoot, avoiding waters, conducting raids, and moving constantly from place to place in the endless search for safety. There is a widespread Sonoran tradition that the Seri systematically exterminate weaklings and oldsters; and it is beyond doubt that the tradition has a partial foundation in the elimination of the weak and helpless through the literal race for life in which the bands participate on occasion. A parallel eliminative process is common among many American aborigines; the wandering bands frequently undergo hard marches under the leadership of athletic warriors with whom all are expected to keep pace, and this leads both to desertion of the aged and feeble and to increased strength and endurance on the part of the strong and enduring; yet it would appear that this merciless mechanism for improving the fit and eliminating the unfit attains unusual, if not unequaled, perfection among the Seri. Now pedal development is one of the special processes of peripheral (or centrifugal) functioning and growth involved in the general process of *cheirization*, which, coordinately with cephalization, defines human progress;¹ and this developmental process explains the specialization of the Seri along one or more lines, and connects the special development directly with environing conditions.

A notable correspondence between structure and function, of such sort as to reflect the habit and habitat, appears in the conspicuous manual development of the Seri. Enjoying a climate too mild to make houses necessary, finding animal food too plentiful to necessitate elaborate contrivances for the chase or milling or other devices for reducing vegetal food, provided by nature with material (in the form of carrizal) for an ideally suitable water craft, barred by geographic boundaries from neighboring tribes, and having neither material for nor interest in commerce, the denizens of Seriland were never forced into the way of mechanical development; yet their simple industries, involving as they

¹The Trend of Human Progress, *American Anthropologist*, new series, vol. 1, 1899, p. 401.

do swift stroke and strong grasp and dexterous digitation, are mainly such as urge manual development more strenuously than would be normal among tribesmen connected with their environment through the medium of tools. The demand for manual strength and skill is intensified among the Seri by both natural and domestic conditions; the ever-ready (and almost the sole) material suitable for simple adjuncts to the hand abounds in the form of wave-worn cobbles; these cobbles are easily usable in such wise as to serve all ordinary purposes, and their abundance discourages the production of more highly differentiated tools; while their habitual use promotes manual strength and deftness, coupled with that digital freedom (required, for example, in grasping a ball) which most clearly distinguishes the human hand from the subhuman paw. Conjoined with these natural conditions are domestic demands tending to cultivate manual fitness and eliminate the manually unfit; for, in addition to the direct industrial premium on dexterity, through which the dexterous survive while the clumsy starve, there is a special premium growing out of the marriage custom, through which only the manually efficient (and at the same time morally acceptable) are put in the way of leaving lines of descendants.¹ Naturally, in view of the combination of factors, all traceable directly or indirectly to environmental conditions, the Seri afford a peculiarly striking example of cheirization extended to an entire tribe (if not to a genetic stock of people)—indeed the remarkably developed Seri hands and feet first suggested the importance of this process of human development and led to its formal characterization.

Accordingly, the robust-bodied and slender-limbed yet big-fisted and big-footed Seri seem to be adjusted, so far as several of their more striking somatic characters are concerned, to distinctive habits themselves reflecting a distinctive habitat; and the coincidences appear to reveal and establish the law of interaction between the human organism and its environment—an interaction effected through the habits and hence through the normal functioning of the individual organisms as constrained through their collective relations. And recognition of the law of interaction opens the way to consideration of other correspondences between structures and functions and environing conditions.

Conspicuous among the more strictly functional traits of the Seri is the intensity of action characteristic especially of the warriors, though in less degree of the entire tribe—an intensity made all the more striking by contrast with the extreme inertness between stresses. Manifestly the capacity for concentrated effort is in harmony with the tribal habits, themselves reflecting habitat. The resource of prime importance in Seriland—that which directly and constantly conditions the very existence of human inhabitants—is potable water. This prime source of life is too heavy to be transported and too unstable to be stored with the facilities of primitive culture, yet it is always within reach of an organism strong enough to journey ten or twenty or fifty

¹ The marital customs of the tribe are described *postea*, pp. 279-287.



SERI RUNNER

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miles in search of it, and acute enough to follow trails and indications. Naturally the meager water-supply serves as a mechanism for sorting out and preserving the strong and the acute, and for eliminating the weakly and the dull; and hence the tribe have developed a faculty, or perhaps a potentiality, of distinctive sort—the potentiality of providing against thirst-death by a reserve power in the organism itself rather than in the form of mechanical devices such as characterize higher culture. Quite similar are the relations to the resource of second importance, i. e., ordinary food. Habituated to dispensing with storage and transportation of their primary resource, and accustomed to finding food whenever forced to sufficiently active effort to obtain it, the Seri have never grasped that first principle of thrift expressed in the accumulation of food supplies; and accordingly they intuitively rely on successful fishing or chase or search of vegetal edibles for sustenance, and habitually delay effort until they are stirred into activity by the pangs of hunger. Naturally this improvidence serves as another mechanism for perpetuating families of stored vitality, and especially those able to prevail over swift or strong or cunning quarry by sustained vigor and alertness after prolonged deprivation; and the effect of this mechanism, too, is to develop a reserve power in the organism itself, in lieu of the material reserve made through thrift in higher culture. Similar in their consequences are the relations of the individual organisms to the third industry of Seriland, i. e., navigation of the gale-swept and tide-troubled waters. Even the buoyant balsa can not weather the williwaws or ride the tiderips of El Infiernillo without exercise of the utmost strength and skill on the part of the navigators; while the often persistent storms may delay for days embarkation on voyages in quest of fresh water or food. Naturally, the frequent delays and not infrequent perils of such navigation constitute a mechanism for selecting navigators possessed of reserve powers adequate to meet desperate emergencies with vigor and judgment even after enervating waits for wind and tide, while those not so well endowed are either brought up to standard in their hard training-school or expelled from their class by drowning or dashing on the rocks, as may happen; so that the effect of this mechanism also is to preserve individuals and perpetuate generations characterized by reserve power, and hence to develop latent potentiality in the tribe. Now, the normal product of these and other natural mechanisms immediately reflecting environmental conditions is capacity for spurts, or for intense functioning under severe stress, despite accentuation of the stress by thirst or hunger or exhaustion, or by all combined—i. e., the effect of habitat and habit is to produce precisely such a somatic regimen as that so conspicuously displayed by the Seri folk. So the intensified activity with long intervals of inertness, simulating the habits of carnivorous and some other lower animals, and hence suggesting primitive condition, would appear to be largely a phylogenetically acquired character expressing specific adjustment to environment.

To the actual observer of the Seri in his prime there is an indefinable but none the less impressive harmony between the intense regimen and the trenchant structural development characteristic of the tribe—a harmony like unto that felt by naturalist and artist alike in viewing at once the clean-cut form and vigorously easy mobility of tiger or thoroughbred horse; and simple inspection of the lithe limbs and body-muscles stirs into living realization a half-felt inference from many facts—the obvious and indubitable inference that they are stress-shaped structures. Accordingly, the concentrated and robust bodies, the shapely jaws, the well-chiseled arms, and the statuesque legs of the Seri, no less than their powerful hands and bulky feet, direct special attention to the axiom that somatic structures are the product of exercise, and indicate with convincing clearness that the structures are trenchantly developed because of the supreme intensity of the creative exercise. It may be impracticable to outline in terms of metabolism the precise processes of waste and repair in organs and organisms, or to define the relative periods of action and assimilation (or of catabolism and anabolism) best adapted to the development of motile tissue; yet the external facts of all bodily growth demonstrate the efficiency of alternating effort and repose, while the characteristics of highly developed animal bodies (including those of the Seri) demonstrate that the most beneficial exercise is that of relatively brief but intense stresses alternating with relatively long intervals of sluggish movement or complete repose. Moreover, the facile metabolism involved in the widely alternating regimen implies exceptional somatic plasticity of the sort normally accompanying youth and attending tissue growth; and this persistent bodily plasticity is in harmony with the peculiarly dilatory maturation characteristic of the Seri tribe. So the animal-like bodies of the Seri, no less than their animal-like movements, which at first sight suggest primitive condition, may safely be held in large measure to reflect specific habits of life, themselves reflecting a distinctive habitat.

Still more suggestive to the observer than the well-molded structures and the intense functioning with which they are conjoined are those elusive yet persistent characteristics of the Seri comprised in their distinctive race sense—characteristics ranging from overweening intra-tribal pride to overpowering extratribal hatred. Even at first blush it would seem obvious that the tribal isolation, itself the reflection of environment, would necessarily tend toward a segregative habit with concomitant hostility toward aliens; yet the race-sense of the Seri so far transcends that of other segregated tribes as to suggest the existence of a specific cause. So, too, it would seem obvious that the race feeling gathers about a corporeal nucleus in the form of the race-type exemplified in the heroic stature, the shapely face, the mighty chest, the luxuriant hair, the well-modeled muscles, the powerful feet and hands, the “collected” carriage, and the stored vitality, which (as already indicated) synthesize the environmental interactions of generations; yet the actual student can not avoid the impression that the



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race-sense dominates the race-type—that the Seri are farther away from neighboring tribes in feeling than in features, in function than in structure, in mind than in body. Now, in seeking the sources of this distinctive (not to say specific) race-sense, several suggestions arise. Naturally the first suggestion is that of simple sexual selection, the (assumptive) analogue of an important factor in biotic evolution; but the suggestion is at once apparently negatived by the fact that all the mature men and women are married and have families of children proportionate to their ages. True, undesirable fiancés may be expelled from the tribe, or even executed (as intimated by neighboring Sonorenses); yet there is little evidence that either method of selection is employed among the Seri more largely than among other peoples; and, as all recent researches indicate, the higher peoples at least have risen above the plane of sexual selection per se as an effective factor in somatic development. A second suggestion arises in the axiom (vivified by realization of the connection between Seri movements and Seri structures) that perfected organs are the product of stressful functioning—indeed, the suggestion is but the extension of the axiom from the individual to the stirp and the group. In developing the suggestion it is convenient to divide the career of the stirp into periods defined by the successive wax and wane of vitality in its most significant manifestations; and this may be done in terms of successive individual lifetimes in their three successive aspects of (1) youth, (2) maturity, and (3) senility, in which the dominant constructive functions are respectively (1) somatic growth, (2) collective growth (comprising both procreation and the accumulation of artificial possessions), and (3) dissipation of somatic vitality and distribution of extrasomatic accumulations (generational as well as material and intellectual). Now, it is a commonplace in every stage of culture that vital capacity, and also the inherent sense of kind manifested in pairing, culminate in the medial portion, or prime, of individual life; and if this universal recognition is valid, it is just to hold that the career of the stirp is defined by the successive vital climaxes expressing the primes of the series of generations pertaining to the stirp. It follows that each generation must represent, not the average qualities of the entire generation past, but the qualities of the most virile and muliebrile fraction of that generation; whence it follows in turn that in general the generations must develop along the lines most prominent in the lives of each people in their prime. The process may be formulated as the *law of periodic conjugation*, under which successive generations are initiated, not at random, but at periods of culminant effectiveness in shaping the course of the stirp. The immediate application of this law to the Seri tribe is manifest, for it explains (the initial condition of isolation and the consequent incipient segregative habit being given) how and why the tribal standards have grown more definite from generation to generation, and have interacted cumulatively with the distinctive environment in such manner as continually to widen the chasm between the desert-

bound tribe and their alien neighbors. Yet the general application of the law leads only to a more specific application; for, just as the career of the stirp is made up of a succession of vital maxima and minima, so the lifetime of the individual, even in the median stage, is made up of a series of vital climaxes separated by relatively inert intervals; and, as recognized by every naturalist and romancist, every philosopher and poet, in every stage of culture, it is during the periods of conative domination by the master passion that the career of the individual is shaped and that the stirp-sentiment (or susceptibility to kind) culminates in intensity. It follows that the progeny of successive generations represent not merely the optimum median stage of life in which vitality and virility and muliebrity are at flood, but the very climaxes of this stage in which manhood and womanhood attain their ideals, and in which the ideals react on the physical system with unequaled intensity; it follows in turn that each generation must (in so far as intellectual tension can control long series of metabolic interactions after the manner in which short series are controlled by direct volitional exercise) incarnate the ideals of the preceding generation; whence it follows still further that in general isolated race-types tend constantly and cumulatively to increase in definiteness—at least until the somatic factors are counterbalanced by demotic relationships arising with considerable increase in population. It is true that the extent to which the incarnation of ideals is effective or even possible has not been measured; it is also true that the naturalists of the higher culture-stages commonly neglect the process; yet the occasional recognition of its positive aspect, as in Goethe's "elective affinities" and in Jacob's getting of "ringstraked, speckled, and spotted" stock (Genesis xxx, 37-41), and the practically universal recognition—more especially among primitive peoples—of its negative aspect in adverse prenatal influences, clearly indicates its importance; the fact that the ancient Greeks at once idealized in unparalleled degree, and produced unexcelled perfection in, the human form being of no small significance. Even if the measure of the incarnation of ideals be reduced to the lowest minimum consistent with common knowledge, it remains true that the progeny of successive generations are not the offspring of average parents, but of pairs at the perfection and conjugal culmination of their virile and muliebrile excellencies; so that the generations must run in courses of cumulatively increasing racial (or human) perfection, under a general *law of conjugal conation*.

In extending the general law of conjugal conation to the Seri, it is found peculiarly applicable, in view of their distinctive marriage custom, the effect of which is to intensify conjugal sentiments, with the attendant magnification, and potential if not actual incarnation, of ideals.¹ Accordingly there would appear to be a harmony between

¹ The law of conjugal conation was indeed suggested by observations on the peculiar marriage custom and peculiarly developed race-sense of the Seri tribe, and it has already been applied in certain of its aspects as an explanation of the initial humanization of mankind (The Trend of Human Progress, American Anthropologist, new series, vol. 1, 1899, pp. 415-418).



YOUTHFUL SERI WARRIOR

Seri race-sense and Seri race-type no less delicate than that between the stressful action and the stress-shaped structures of the tribe, and while the inception of both type and feeling may be ascribed to the isolated environment, it seems manifest that both have interacted constructively and in cumulative fashion through a significant process exemplified more clearly by this tribe than by others thus far studied. At the same time, analysis of the harmony between type and sentiment indicates that the lowly Seri are actually, albeit unconsciously, carrying out a meaningful experiment in stirpiculture—an experiment whose methods and results are equally valuable to students. The Seri gymnastic and the Seri stirpiculture are in close accord, in that both are conditioned by initially dilatory yet ultimately intense action; the results are equally accordant in that the one conduces toward individual vigor and the other toward a vigorous and distinctive stirp; while the excellence of the methods (viewed from the somatic standpoint) is attested by the magnificence of the product. Now, comparison of the stirpicultured Seri with contemporary tribes shows that the desert-bound folk have attained unequaled somatic development, and suggests that the intuitive stirpicultural processes have been rendered peculiarly effective through the persistence of that tribal isolation in which the processes apparently took rise; so the race-sense of the Seri may be regarded as the product of long-continued stirpicultural processes, initially shaped by environment, yet developed to unusual degree by somatico-social habits, kept alive largely through continuous environmental interaction.

Summarily, the Seri are characterized by noble physique, by peculiarly swift and lightsome movements, by great endurance coupled with capacity for vigorous action, by animal-like symmetry and slowness of maturation, and by various minor attributes combining with the major features to form a distinctive race-type; and they are still more conspicuously characterized by an acute race-sense which holds them apart from all aliens. At first sight, several of their somatic attributes seem incomparably primitive, yet analysis of the attributes in the light of certain laws which they exemplify better than other peoples thus far studied indicates not so much a lack of development as an excess of growth along purely somatic lines, with a correlative defect of development along demotic lines; and when the lines of growth are traced to the sources and conditions, it becomes fairly clear that the aberrant development of the tribe is merely the reflection of a distinctive environment operating (evidently) throughout a long period. In brief, the somatic interest of the Seri seems to center in the remarkable adjustment of the tribe to a peculiar environment—an adjustment of such delicacy as to imply interaction throughout many generations.

DEMOTIC CHARACTERS

The Seri, like all other peoples, are characterized by various collective attributes which vastly transcend in interest and importance the somatic attributes exhibited by the individuals. These superorganic attributes are essentially activital—i. e., they represent what the people *do* rather than what they merely *are*; and in both collective and activital aspects they serve to distinguish the human realm from the organic realm, and to afford a basis for the classification of mankind—i. e., they combine to form demotic characters.

The demotic characters of the Seri, like those of other peoples, may be classed as (1) esthetic, (2) industrial, (3) institutional, (4) linguistic, and (5) sophic; and in this order the essentially human attributes of the tribe (except the last named) may be described. It is a matter of deep regret that the data concerning the demotic characters of the tribe are too meager to afford more than a mere outline of their activities, and that their suggestive mythology must be passed over for the present.

SYMBOLISM AND DECORATION

FACE-PAINTING

One of the most conspicuous customs of the Seri is that of painting the face in designs by means of mineral pigments. Of the 55 members of the tribe shown in the group forming plate XIII, 28 (in the original photograph; a somewhat less number in the reproduction) exhibit face-painting more or less clearly, and this proportion may be regarded as typical; i. e., about half of the tribe are painted.

On noting the individual distribution of face-painting, it is found to be practically confined to the females, though male infants are sometimes marked with the devices pertaining to their mothers, as adult warriors are said to be on special occasions; and so far as observed all the females, from aged matrons to babes in arms, are painted, though sometimes the designs are too nearly obliterated by wear to be traceable. About 35 of the individuals shown in the group (plate XIII) are females; of these, fully four-fifths showed designs or definite traces of the paint, while the remaining fifth bore traces too faint to be caught by the camera; but none of the men or larger boys were painted. In the smaller group shown in plate XIV all of the females display paint, as does the small boy in the center also, while the man (husband of the middle-aged matron) reveals no trace of the symbol. The two pictures typify the prevalence and the distribution by sex of the painting.



SERI BELLE

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the *Seri belle* shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full-dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent.

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the *Seri* matron portrayed in plate XX is repeated with minor variations in that of her daughter, the *Seri* maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular *jacales* (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring *jacales* bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features.

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ochereous clay or ochereous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is

prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and applied, the fact that they are indispensable feminine appurtenances even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of their meaning was obtained through Mashém, the interpreter at Costa Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and



SERI MAIDEN

these only with some uncertainty, viz, the Turtle clan,¹ denoted by the symbols of Juana Maria (plate XVIII) and Candelaria (plate XXIV and the upper left figure in plate XXVI); the Pelican clan, denoted by the designs of two typical matrons (plates XX and XXII) and a typical maiden (plate XXV), and probably also by those of the medio-lateral figures in plate XXVI; and (still less certainly) the Rattlesnake clan, denoted by the symbol of the lower left figure in this plate. The special sematic values of the colors also are esoteric, and were not ascertained; even in the case of the simple pelican design, the difference in meaning between the solid red pattern of one group and the similar pattern of white in another group was successfully concealed. So, too, the significance of the various subordinate or supplementary devices—the distinct border-line shown in plate XX, the lower cheek devices in plate XXIV, the separate chin mark in plate XXV, the fetish-like symbols on the lower cheeks in the lower left figure of plate XXVI, etc—eluded inquiry; while some of the minor features of both form and color were sufficiently variable in the devices borne by different faces of the same family, and even in successive paintings of the same face, to suggest some individual freedom in carrying out the detail of the generally uniform designs.

The telic functions, or ultimate purposes, of the face-painting are also esoteric, though not beyond the reach of inference from the sematic functions, coupled with general facts of zoic and primitive human customs. Even at first sight the painted devices bring to mind the directive markings of lower animals defined by Professor Todd² and interpreted by Ernest Seton-Thompson;³ and in view of the implacably militant habit of the Seri it would seem evident that the artificial devices are, at least in their primary aspect, analogous to the natural markings. On analyzing the directive markings of animals, it is convenient to divide them into two classes, distinguished by special function, usual placement, and general relation to animal economy: the first class serve primarily to guide flight in such manner as to permit ready reassembling of the flock; they are usually posterior, as in rabbit, white-tail deer, antelope, and various birds; and they primarily signify inimical relations to alien organisms, with functional exercise under stress of fear. The second class of markings serve primarily for mutual identification of approaching individuals; as comports with this function, they are usually facial, or at least anterior; and their functional exercise is normally connected with peaceful association—though the strongly emphasized facial symbols of the males doubtless

¹This tutelary may be the shark; it was described as a water monster instrumental in the creation and good for food, but the identification is not beyond doubt. Cf. p. 278.

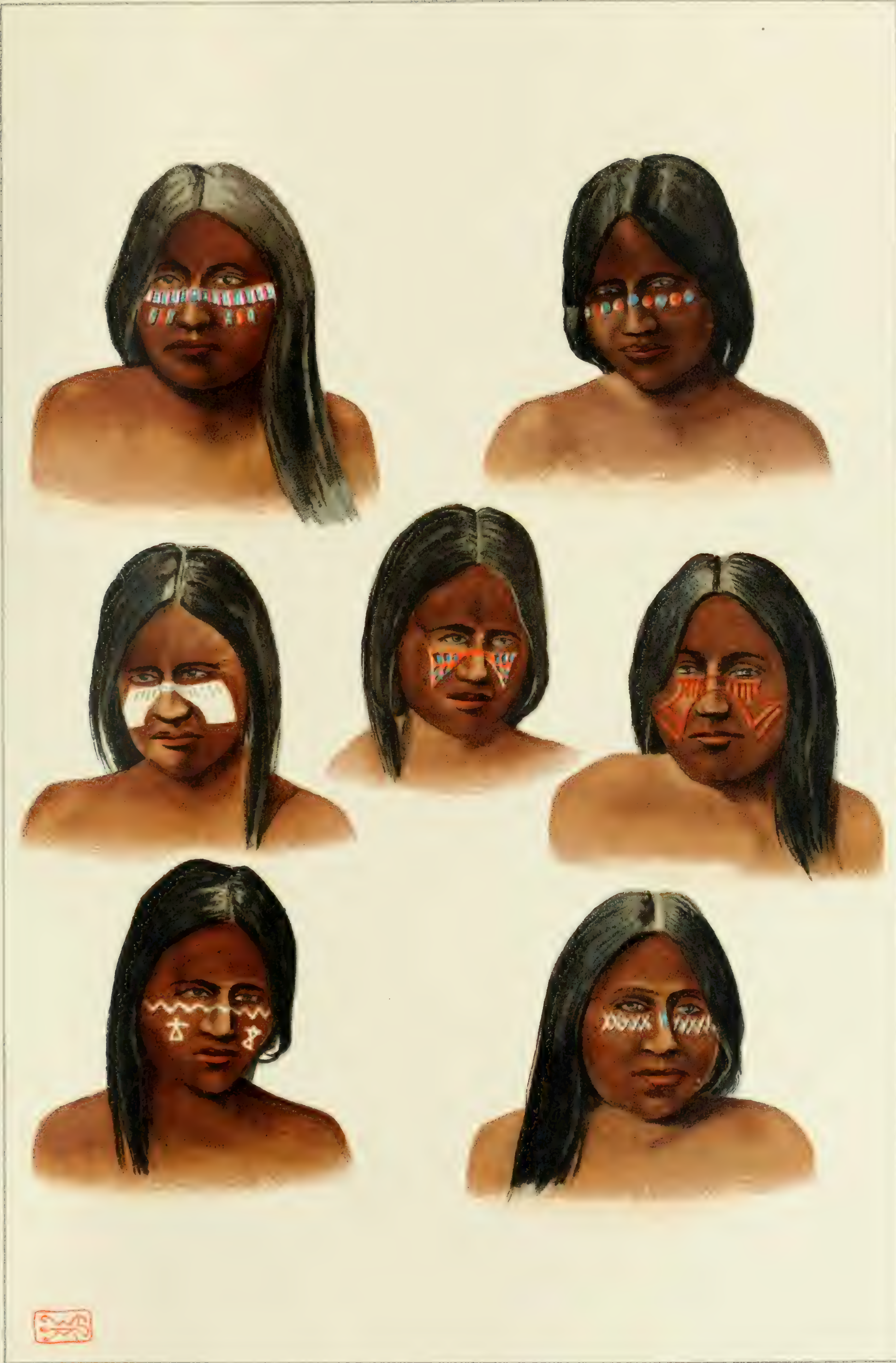
²American Naturalist, vol. XXII, 1888, pp. 201-207.

³Wild Animals I Have Known, 1898, p. 119; Century Magazine, vol. LIX, 1900, pp. 656-660. In his lectures, Mr Seton-Thompson extends his interpretations to anterior as well as to posterior markings, especially the conspicuous and persistent facial features of deer, antelope, mongrel (or ancestral) dog, etc. Such facial markings seem especially characteristic of gregarious animals; and they are peculiarly significant as social symbols rather than as mere beacons for guidance in flight.

blazon forth the alternative meanings of preference for peace or readiness for strife, like the calumet tomahawk of the Sioux warrior (as interpreted by Cushing). So the directive markings of the first class are substantially beacons of danger and fear, while those of the second are just as essentially standards of safety and confidence; and they may properly be designated as *beacon-markings* and *standard-markings*, respectively.¹ On seriating the two classes in terms of development, it is at once found that the beacon-markings are in large measure connected with excursive movement and are centrifugal in effect, while the standard-markings are connected mainly with incursive movement and are centripetal in effect; at the same time the latter express not only the higher intelligence, but also the greater degree of that conjuncture which forms the basis of collective organization; so that the latter unquestionably represents the higher developmental stage. Now, the primary functions of these directive markings of the higher grade—signalization (or attentionization) and identification—correspond precisely with paramount needs of the alien-hating and clan-loving Seri; so that careful analysis would seem fully to justify the casual impression of functional similitude between the Seri face-painting and the directive markings of social animals.

While the first survey establishes a certain analogy between the primitive face-painting and the standard-markings of animals, an important disparity is noted when the survey is extended to individuals; for among beasts and birds the standards are usually the more conspicuously displayed by the males, while the paint devices of the Seri are confined to the females. A suggestion pointing toward explanation of this disparity is readily found in the seriation of developmental stages marked by (1) the fear-born beacon-markings, (2) the confidence-speaking standard-markings, and (3) the painted symbols; for the artificial devices coincide with an immeasurably advanced mental development, with concomitant advance in safety and peace on the one hand and in artificializing weapons on the other hand. This suggestion alone fails to explain the disparity fully, yet it raises another, growing out of the great social advancement connected with the mental development—i. e., the effect of the distinctively demotic organization of the human genus as represented by the Seri people. On considering this organization, it is found strictly maternal: the tribe is made up of clans defined by consanguinity reckoned only in the female line; each clan is headed by an elderwoman, and comprises a hierarchy of daughters, granddaughters, and (sometimes) great-granddaughters, collectively incarnating that purity of uncontaminated blood which is the pride of the tribe; and this female element is supplemented by a masculine element in the persons of brothers, who may be war-chiefs or shamans, and may hence dominate the movements of groups, but whose

¹The fundamental distinction is none the less valid by reason of the occasional combination of functions, as in the antelope "*chrysanthemum*" interpreted by Seton-Thompson.



CHARACTERISTIC FACE PAINTING

blood counts as nothing in the establishment and maintenance of the clan organization. Thus the females alone are the blood-carriers of the clans; they alone require ready and certain identification in order that their institutional theory and practice may be maintained; and hence they alone need to become bearers of the sacred blood-standards. The warriors belong to the tribe, and are distinguished by luxuriantly flowing hair, by the up-stepping movement from which the people derive their appellation, by their unique archery attitude, and by their dark skin-color; the boys count for little until they enter the warrior class; but on the females devolves the duty of defining and maintaining the several streams of blood on which the rigidly guarded tribal integrity depends.¹ Undoubtedly the blood-markings play an important rôle in courtship and marriage, but too little is known of the esoteric life of the tribe to permit this rôle to be traced.

In brief, the Seri face-painting would seem to be essentially *zoosematic*, or symbolic of zoic tutelaries, and to signify subspecific (or sub-varietal) characteristics maintained by the clan organization and kept prominent by the militant habit of the tribe; at the same time it is noteworthy that the purely symbolic motive is accompanied by a nascent decorative tendency, displayed by the individual refinement of form and color in the symbol proper to each of the groups.

DECORATION IN GENERAL

Aside from the face-painting there is a conspicuous dearth of decoration or tangible symbolism among the Seri.

The symbolic or decorative modification of the physique would seem to be limited to two classes of mutilations, of which one was observed at Costa Rica in 1894 while the other is apparently obsolete. The observed corporeal modification is the absence of medial superior incisors of the females, in consequence of forcible removal at a period not definitely ascertained. The interpreter at Costa Rica was uncommunicative on the subject; Don Pascual opined that the mutilation formed part of an elaborate puberty ceremonial, and this opinion would seem to be corroborated by the condition of the cranium of an immature female examined by Dr Hrdlička; but since the half-dozen adult maidens at the rancho in 1894 were free from the mutilation while all the wives bore its gruesome trace, it would seem more probable that the custom is connected with marriage. Whatever the period of the infliction, Mashém's guarded expressions seemed to indicate that it was a mark of physical inferiority; and this suggestion, interpreted in the light of the Seri use of teeth as weapons of offense and defense, would seem to indicate that the mutilation is at once the badge of corporeal inferiority and a means of maintaining the physical superiority of the males—of course in that theoretically fiducial but actually forceful way characteristic of primitive culture.

¹ The essentially zoocratic nature of Seri law and custom is set forth postea, p. 294.

The second mutilation was the only corporeal modification noted by early missionaries and explorers—it was the perforation of the nasal septum for the insertion of a skewer, perhaps of polished stone (though doubtless more commonly of bone), to which swinging objects were attached. One of the most useful records is that of the Jesuit, Padre Joseph Och, who described the nasal attachment as a small, colored stone suspended by cords from the perforated septum, and guarded with such jealous veneration that “one must give them at least a horse or a cow for one” (ante, p. 78); while according to Hardy’s record, the nasal fetish is “a small, round, white bone, 5 inches in length, tapering off at both ends, and rigged something like a cross-jack yard.”¹

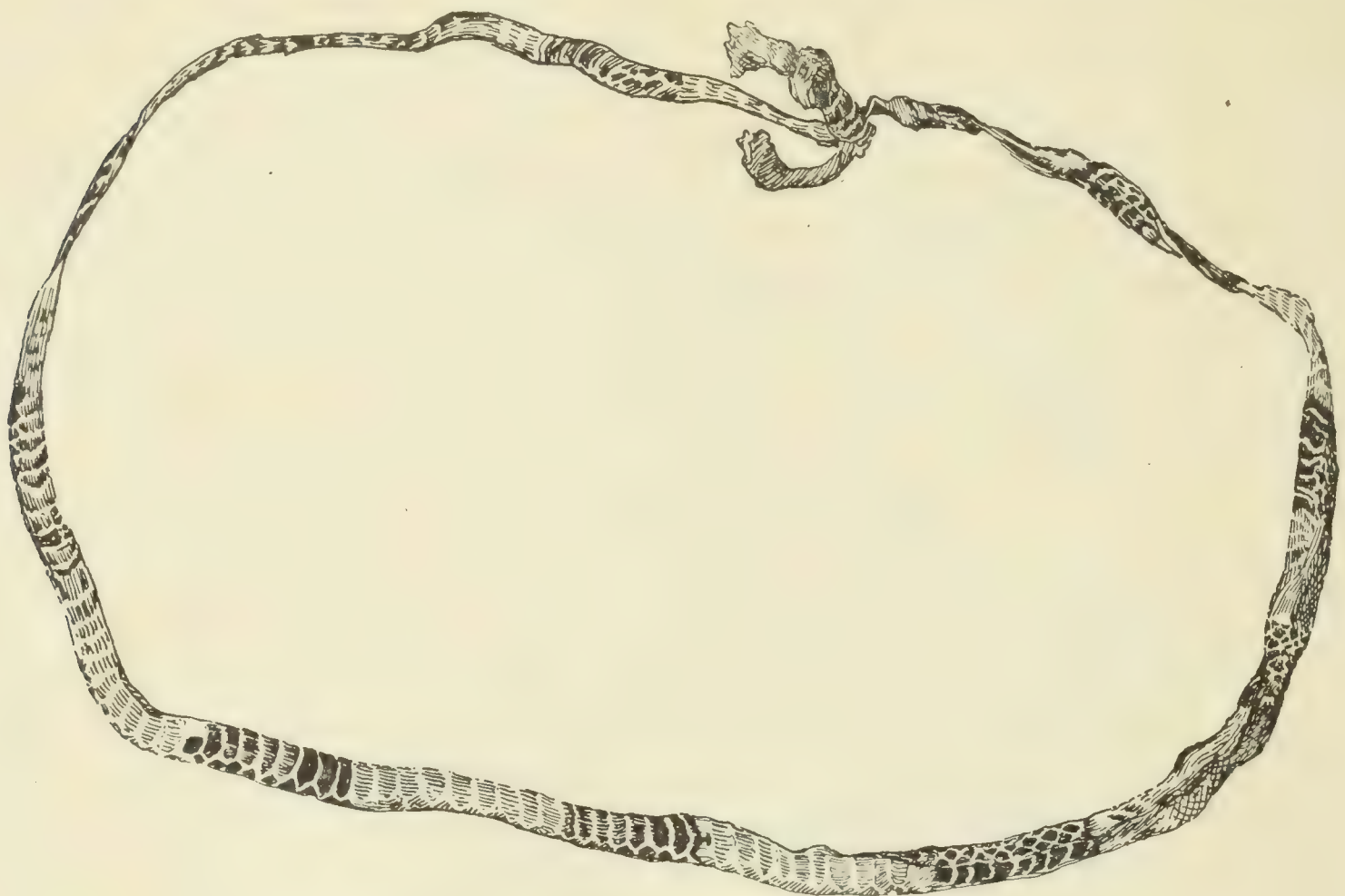


FIG. 7—Snake-skin belt.

The custom is apparently obsolete, and nothing is known directly of details or motives.

Excepting these mutilations the corporeal decoration of the Seri is apparently limited to the face-painting: among the 60 individuals at Costa Rica in 1894 there was no trace of tattooing or scarification of face, limbs, or body; there were no labrets or earrings, and neither lips nor ears were pierced, nor were nasal septa observed to be perforated in accordance with the reputed ancient custom; the teeth were neither filed nor drilled; no indications of amputation or other maiming (save the removal of the incisors) were observed—indeed, the instinct for physical markings of symbolic or decorative character, which seems to be normal to primitive men, was apparently satisfied by the prevalent and persistent face-painting among the females.

The extra-corporeal decorative devices are of a meagerness and pov-

¹ Travels, p. 286.



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erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a



FIG. 8—Dried flower necklace.

fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammas or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

young warriors is a snake skin (such as that illustrated in figure 7); but so far as was seen the belts are not extended into tassels, decorative appendages, or even flowing ends.

The presumptively decorative costumery observed is limited to necklaces, usually of strung seeds, shells, and beads of wood or bone (figures 8, 9, 10, 11, 12, and 13), though animal appendages, such as hoofs, teeth, etc., are sometimes worn. The most highly prized necklace found at Costa Rica was a human hair cord with nine *crotalus* rattles attached (figure 14), worn by a young warrior of the Rattlesnake (?) clan. Not the slightest indication of head-dresses was seen (though deer and lion masks are said by Hardy to have been worn on occasions); there were no brace-



FIG. 9—Seed necklace.



FIG. 10—Nut pendants.

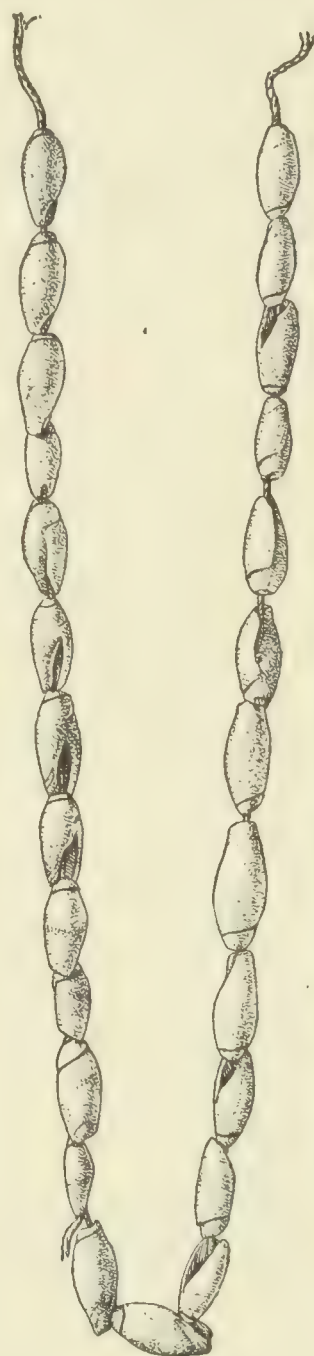


FIG. 11—Shell beads.

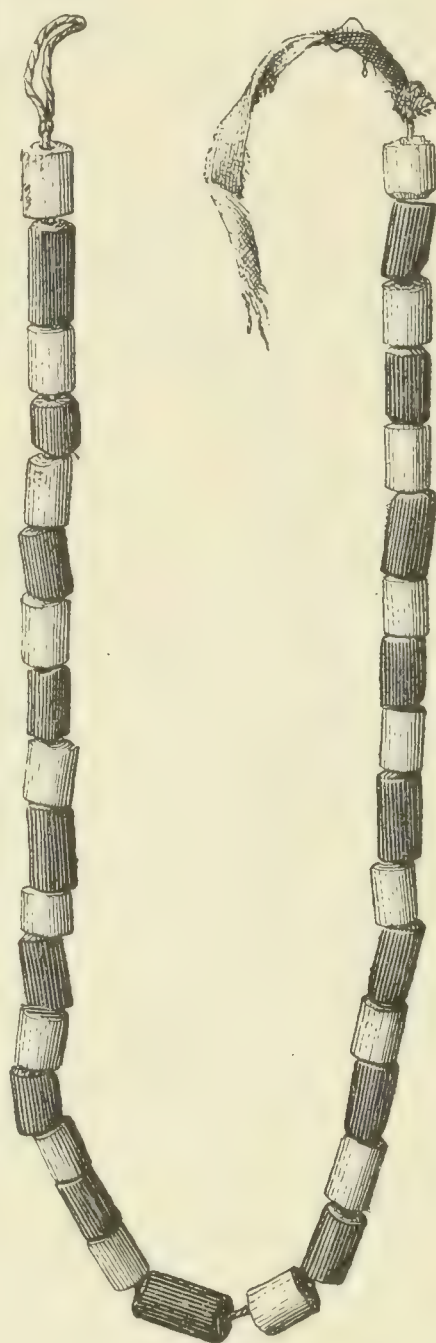


FIG. 12—Wooden beads.

lets, leg-bands, or rings of any description, and the cheap jewelry given to many of the women and youths at Costa Rica was either strung about the neck or concealed; while it is significant that even the showiest jewelry was less appreciated than bits of manta or lumps of sugar. When it is remembered that the Seri have been in occasional contact with Caucasians for over three and a half centuries, the fact that not a single glass bead was found among them becomes significant; and the significance of the simple fact is increased by the virtual absence of that persistent desire and protean use for beads—or bead-sense—so prominent among most primitive tribes.

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Mashém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);¹ yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

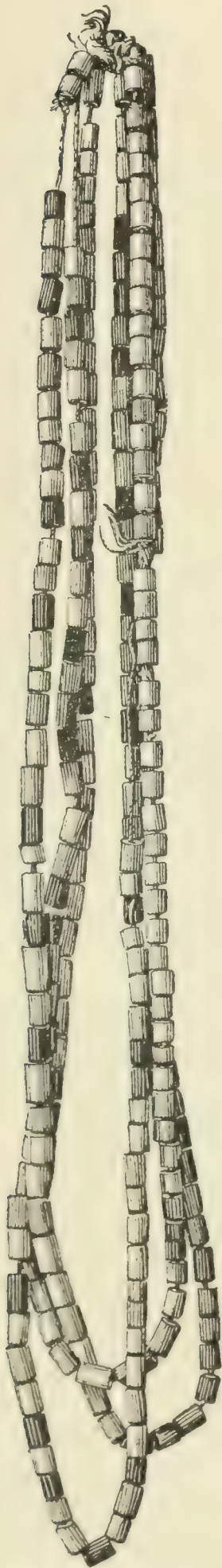


FIG. 13—Necklace of wooden beads.

¹ Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (*Travels*, p. 282), and also described a wind-symbol and an effigy used for thaumaturgic purposes (*ibid.*, pp. 294, 295).

life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

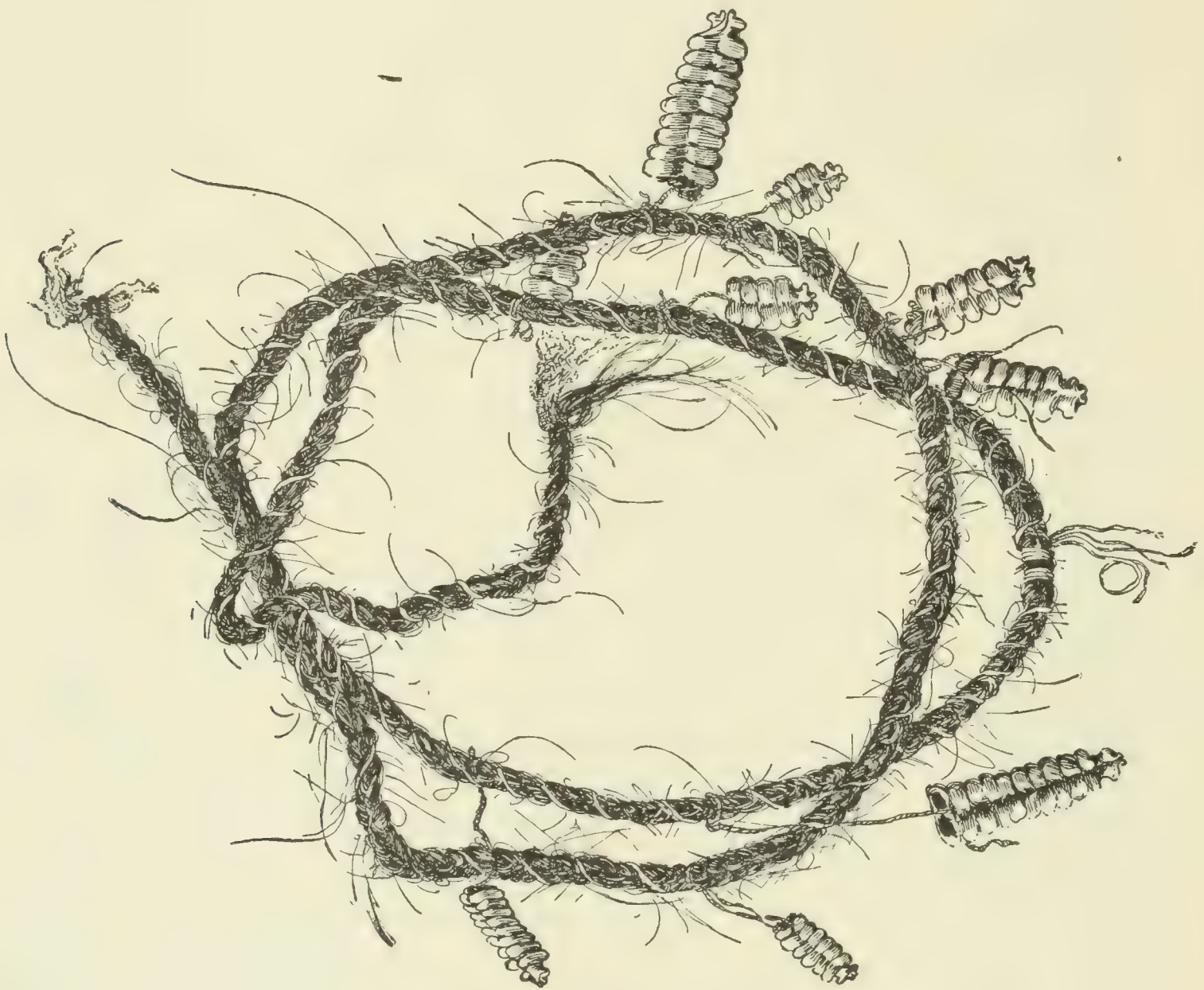


FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient “despoblado” from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 90 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the *balsa*, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattle-snake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the *vaqueros* on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

limited as it is to a single line of symbolic portrayal, is still more abjectly meager.

Any comparison of the Seri esthetic with that of other Amerind tribes serves only to emphasize its paucity: the tribes of the plains, with their eagle-feather headdresses, elaborately arranged scalp-locks, widely varied face-painting, and ritualistic camp circles; the Pueblo peoples, with their ornate masks, elaborate altars, figured stuffs, and painted pottery; the denizens of the eastern woods, with their feather-decked peace-pipes, divinatory games, fringe-bordered garments, and prayer-inscribed arrows; the coastwise peoples of the upper Pacific, with their labrets and tattoo-marks, totem-poles and carved house-fronts, painted canoes and prodigal potlatches; the neighboring desert tribes, with their festal footraces, decorated pottery and basketry, pendent scarfs and garters, and well-wrought caskets for family fetishes; even the timid acorn-eaters of California, with their sacramental baskets, artistically befringed kilts, bead-strings of far-traveled nacre, and patiently wrought fabrics of rare feathers—all of these seem rich in esthetic motives when contrasted with “los pobrecitos” of arid Seriland. And the contrast is only intensified when the economic motives of the various tribes are compared: the industrial motives of the Seri are fairly numerous and diverse; they are skilful huntsmen, successful fishermen, capable navigators, and competent warriors (as attested by the protection of their principality for centuries), so that despite the absence of agriculture and the avoidance of commerce, their industrial range is not very far below the aboriginal average; and while they are deficient in thrift, this shortcoming is balanced by a peculiarly developed vital economy whereby they are delicately adjusted to their environment, as has been already shown. On the whole, it would appear that the Seri are not only lower in esthetic development than the contemporary tribes thus far studied, but also that they stand at the bottom of the scale in the ratio of esthetic to industrial motives.

THE SIGNIFICANCE OF DECORATION

Largely through recent researches among the American aborigines, it has been shown that decorative and many if not all other esthetic concepts normally arise in symbolism, gradually expand in conventionism, and eventually mature in a realism which is itself the source of ever-extending esthetic motives; and the observations on the lowly Seri afford opportunity for somewhat extending the generalizations based on higher tribes.

When peoples of unequal cultural development are compared, it is commonly found that the higher are the more independent in action and thought: thus, advanced peoples make conquest of nature for their own behoof, while primitive peoples are largely creatures of environment; Caucasian citizens are self-conscious lawmakers, while Amerind tribesmen are semiconsciously dominated by mysteries fearsomely

interpreted by their shamans; and, in general, enlightened men think and speak freely, come and go as they like, and discard the badges of conventionism, while savages are constrained by customs carrying the power of law, controlled by precedent, and clothed in hierarchic regalia. So, too, when a particular series of tribes are compared, it is found that those of higher culture (or wider knowledge) are the more independent, the more given to essays in social and industrial and other lines of activity, and hence the more varied in esthetic and economic motives: thus, the several Iroquoian tribes integrated the knowledge proper to each, and thus made themselves an intellectual and physical power able to eliminate or assimilate the isolated tribes on their borders; the sages of the Siouan stock induced the warriors of their leading tribes to combine in a circle of seven council fires, which grew into the great Dakota confederacy and soon gained strength to dominate the entire northern plains; but while these and other federations were pushing forward on the way leading to feudalism and thence to national organization, the self-centered California tribes consecrated their tongues to their own kindred, thereby stifling culture at its source and virtually leashing themselves unto the acorn-bearing oaks of their respective glades. Still more striking are the differences in independence revealed by a comparison of human and subhuman organisms; for the humans are immeasurably freer and more spontaneous in thought and action than even the highest beasts: thus, the Seri blood-bearer applies, renews, and elaborates her face-mark at will, while the antelope and the raccoon unconsciously develop their standard-marks through the tedious operation of vital processes regulated under the cruel law of survival; men make their beds according to the dictates of judgment, while the half-artificialized dog lies down in accordance with a hereditary custom which has been needless for a hundred generations; and the very essence of human activity is volitional choice (or artificial selection), while the keynote of merely organic agency is the nonvolitional chance of natural selection. No less striking are the differences found on comparing other realms of nature, in which the higher are invariably characterized by the greater independence; the animal realm is distinguished from the vegetal realm mainly by the possession of volitional motility; while the vegetal is distinguished from the mineral realm chiefly by those better selective powers exemplified in vital growth. The several comparisons seem to define that course of volitional development arising in the chemical and mechanical affinities of the mineral realm, burgeoning in simple vitality, multiplying in the motility of animal life, greatly expanding in the collective activity of demotic organization, and culminating in the conquest of nature through the mind-guided powers of enlightened mankind. Expressed briefly, this course of development may be characterized as the progressive passage from *automacy* to *autonomy*.

The volitional development thus seriated may be divided, somewhat

arbitrarily yet none the less safely, into its esthetic and economic factors; and, for convenience, the latter may be considered to comprise the industrial, institutional, linguistic, and sophic constituents—i. e., the esthetic activities may be juxtaposed against the several other activities of demotic life. When this division is made, it at once becomes manifest that the esthetic activities are the freest and most spontaneous of the series, and hence lead the way to that autonomy which marks the highest development. This significant relation has been glimpsed by various artists and poets, scholars and naturalists; it was at least partly caught by Goethe when he taught that knowledge begins in wonder; it was loosely seized by Schiller, and later by Spencer, in the surplus-energy theory of play; it was grasped by Groos in his prophecy theory of play,¹ and still more firmly (although less conspicuously) by Seton-Thompson in his analysis of animal conduct and motives. The relation has for some years been recognized as one of the principles underlying the American ethnologic researches; yet it is not so well understood as to obviate the need for further consideration. Accordingly it may be pointed out that while the human activities and the agencies of lower nature rest alike on a mechanical foundation, the mechanical element diminishes in relative magnitude in passing from the lower to the higher realms of nature: in the mineral realm the agencies may be deemed mechanical in character and individual in effect; in the vegetal realm vitality is superadded, and the effects are carried forward through heredity; in the animal realm motility is added in turn, and instinct arises to shape the individual and hereditary and motile attributes; the social realm may be considered to be marked by the accession of conjuncture, with its multifarious and beneficent effects on individuals, generations, movements, and groups; while the rational realm may be defined as that arising with the accession of reason as a guide to action, and with the development of nature-conquest as its most characteristic effect—though it is to be noted that the several transitions are progressive rather than saltatory. Thus each realm is characterized by the attributes of each and all of those lower in the scale, plus its own distinctive attribute. It may also be pointed out that each new attribute defining a higher realm is freer and more spontaneous than those of lower realms; for vitality is freer than mere affinity, self-movement than mere growth, and cooperation than mere movement, while reason-led action is freest of all. Accordingly each realm (as already implied) is characterized by a larger autonomy than any of those lower in the scale; i. e., by all the factors of autonomy in the lower realms, plus its own distinctive factor.

It may be pointed out further that, in the higher realms at least, the action normal to each realm tends to generate that characteristic of the next higher realm: the self-movement of the animal realm is, under favorable conditions, constrained through vital economy to fall

¹ Cf. *American Anthropologist*, new series, vol. 1, 1899, p. 374.

into the conjustment of the social realm; and the organization of the social realm, involving as it does a hierarchic arrangement of organisms according to mentality,¹ habituates the higher individuals of the organizations to that control of lower individuals which buds in agriculture, blossoms in civil rule, and fruits in nature-conquest. Thus the factors of each realm are prophetic of the distinctive factor of the next higher—and the prophecy is not merely passive, but is, rather, an actual step in causal sequence.

It may be pointed out still further that, in the higher realms at least, spontaneous action necessarily precedes maturely developed function: in the vegetal realm the tree shoots upward before its form is shaped and its tissue textured by wind and sun and environing organisms; in the animal realm youthful play presages the prosaic performances normal to adult life; in the social realm men behave before framing laws of behavior; and in the rational realm fortuitous discovery paves the road for sure-footed invention. Thus natural initiative arises in spontaneous action, while mechanical action is mainly consequential.

It may be pointed out finally that the field of spontaneous action is relatively increased with the endless multiplications of action accompanying the passage from the lower realms to the higher—indeed the relations may be likened unto those of exogenous growth, which is largely withdrawn from the irresponsive and stable interior structures and gathered into the responsive and spontaneously active peripheral structures; so that spontaneous activity attending natural development is relatively more important in the higher stages than in the lower.²

Now, on combining the several indications it is found clear (1) that the more spontaneous developmental factor in all normal growth corresponds with the esthetic factor in demotic activity; (2) that this is the initiatory factor and the chief determinant of the rate and course of development; (3) that it is of relatively enlarged prominence in the higher stages; and hence (4) that the esthetic activities afford a means of measuring developmental status or the relative positions in terms of development of races and tribes.

On applying these principles to the Seri tribe, in the light of their meager industrial motives and still poorer esthetic motives, it would appear that they stand well at the bottom of the scale in demotic development. Their somatic characteristics are suggestively primitive, as already shown; and the testimony of these characteristics is fully corroborated by that of their esthetic status as interpreted in the light of the laws of growth.

¹The spontaneous arrangement of organisms in accordance with mental grade is well illustrated by that solidarity of desert life which matures in the cultivation of plants and the investigation of animals (*The Beginning of Agriculture*, in *The American Anthropologist*, vol. VIII, October, 1895, pp. 350-375; *The Beginning of Zooculture*, *ibid.*, vol. x, July 1897, pp. 215-230.)

²The laws of growth recognized herein have been somewhat more fully outlined elsewhere, notably in *The Earth the Home of Man* (*Anthropological Society of Washington, Special Papers* 2, 1894, pp. 3-8), and in *Piratical Acculturation* (*American Anthropologist*, vol. XI, 1898, pp. 243-249).

INDUSTRIES AND INDUSTRIAL PRODUCTS

The pacific vocations of the Seri are few. They are totally without agriculture, and even devoid of agricultural sense, though they consume certain fruits and seeds in season; they are without domestic animals, though they live in cotolerance with half-wild dogs, and perhaps with pelicans; and they are without commerce, save that primitive and inimical interchange commonly classed as pillage and robbery. Accordingly, their pacific industries are limited to those connected with (1) sustentation, chiefly by means of fishing and the chase; (2) navigation and carrying, (3) house-building, (4) appareling, and (5) manufacturing their simple implements and utensils; and these constructive industries are balanced and conditioned by the destructive avocation of (6) nearly continuous warfare.

FOOD AND FOOD-GETTING

The primary resource of Seriland is raised to the first place in realized importance only by its rarity, viz, potable water—a commodity so abundant in most regions as to divert conscious attention from its paramount role in physiologic function as well as in industrial economy. The overwhelming importance of this food-source is worthy of closer attention than it usually receives. Classed by function, human foods are (1) nutrients, including animal and vegetal substances which are largely assimilated and absorbed into the system; (2) assimilants, including condiments, etc, which promote alimentation and apparently aid metabolism; (3) paratriptics, or waste preventers, including alcohol and other stimulants, which in some little-understood way retard the waste of tissue and consequent dissipation of vital energy; and (4) diluents, which modify the consistency of solid foods and thereby facilitate assimilation, besides maintaining the water of the system. Classed by chemic constitution, the foods may be divided into (1) proteids, or nitrogenous substances, including the more complex animal and vegetal compounds; (2) fats, or nonnitrogenous substances in which the ratio of hydrogen and oxygen is unlike that of water, and which are second in complexity among animal and vegetal compounds; (3) carbohydrates, or nonnitrogenous compounds of carbon with hydrogen and oxygen in the proportions required to form water, which are among the simpler vegetal and animal compounds; and (4) minerals, chiefly water, with relatively minute quantities of various salts. Both classifications are somewhat indefinite, largely because most articles of food combine two or more of the classes; yet they are useful in that they indicate the high place of the simple mineral water among food substances. Quantitatively this constituent stands far in the lead among foods; the human adult consumes a daily mean of about $4\frac{1}{2}$ pounds of simple liquids and $2\frac{1}{2}$ pounds of nominally solid, but actually more than half watery, food; so that the

average man daily ingests nearly 6 pounds of water and but little over 1 pound of actually solid nutrients. Thus the ratio of the consumption of liquid food to that of solids is (naturally, in view of that readier elimination of the liquid constituent so characteristic especially of arid regions) somewhat larger than the ratio of water to solids in the human system, the ratios being nearly 6:1 and 4:1, respectively.¹ This analysis serves measurably to explain the peculiarly developed water-sense of all desert peoples, a sense finding expression in the first tenets of faith among the Pueblos, in the fundamental law of the Papago, and in the strongest instinct of the Seri; for among folk habituated to thirst through terrible (albeit occasional) experience, water is the central nucleus of thought about which all other ideas revolve in appropriate orbits—it is an ultimate standard of things incomparably more stable and exalted than the gold of civilized commerce, the constantly remembered basis of life itself.

The potable water of Seriland is scanty in the extreme. The aggregate daily quantity available during ten months of the average year (excluding the eight wettest weeks of the two moist seasons) can hardly exceed 0.1 or 0.2 of a second-foot, or 60,000 to 125,000 gallons per day, of living water, i. e., less than the mean supply for each thousand residents of a modern city, or about that consumed in a single hotel or apartment house. Probably two-thirds of this meager supply is confined to a single rivulet (Arroyo Carrizal) in the interior of Tiburon, far from the food-yielding coasts, while the remainder is distributed over the 1,500 square miles of Seriland in a few widely separated aguajes, of which only two or three can be considered permanent; and this normal supply is supplemented by the brackish seepage in storm-cut runnels, as at Barranca Salina, or in shallow wells, as at Pozo Escalante and Pozo Hardy, which is fairly fresh and abundant for a few weeks after each moist season, but bitterly briny if not entirely gone before the beginning of the next. The scanty aggregate serves not only for the human but for the bestial residents of the Seri principality; and its distribution is such that the mean distance to the nearest aguaje throughout the entire region is 8 or 10 miles, while the extreme distances are thrice greater.

The paucity of potable water and the remoteness of its sources naturally affect the habits of the folk; and the effect is intensified by a curious custom, not fully understood, though doubtless connected with militant instincts fixed (like the habits of primitive men generally) by abounding faith and persistent ritualistic practice—i. e., the avoidance of living waters in selecting sites for habitations or even temporary camps. Thus the principal rancherias on Tiburon island, about Rada Ballena, are some 4 miles from Tinaja Anita, the nearest aguaje; the

¹ The place of water among food substances is more fully discussed in *The Potable Waters of Eastern United States*, 14th Ann. Rep. of the U. S. Geol. Survey, 1894, pp. 5-8; the physiologic consequences of deprivation of water are outlined in *The Thirst of the Desert*, *Atlantic Monthly*, April 1898, pp. 483-488.

extensive rancherías near Punta Narragansett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 15 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;¹ and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. ($13\frac{3}{8}$ inches), mean diameter 32.5 cm. ($12\frac{3}{4}$ inches); plain olla, height 32 cm. ($12\frac{5}{8}$ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

¹ The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at \$10 or \$12 per gallon, or about the wholesale price of the finest champagnes.

even the ware of the wide-wandering Papago is more extravagant than that of the Seri in the ratio of 100 to 54. It is noteworthy, too, that the typical Seri ware is much more uniform than that of the other tribes; the various specimens seen in use at Costa Rica, and nearly entire in various parts of Seriland, were closely similar in form and nearly alike in dimensions; while the innumerable smaller fragments scattered over Seriland and the neighboring "despoblado" or buried amid the shells of Punta Antigualla correspond precisely in thickness, in curvature, in material, and in finish with the ware observed in use.

Neither the manufacture of the ware nor the sources of material have been observed by Caucasians. Examination of the specimens indicates that the material is a fine and somewhat micaceous clay, apparently an adobe derived from granitoid rocks; and such material might be

Ratio of capacity to weight among Indian ollas ¹

	Capacity	Weight	Ratio	Mean ratio
	<i>Liters</i>	<i>Kilograms</i>		
Seri:				
Plain	15. 14	1. 91	0. 126	} 0. 137
Painted	15. 61	2. 30	. 147	
Papago:				
No. 1	17. 03	4. 08	. 239	} . 253
No. 2	8. 51	2. 38	. 279	
Sia	15. 14	3. 82	. 252	} . 271
Zuñi	12. 30	3. 18	. 258	
Acoma	15. 61	4. 31	. 276	
Hopi	13. 72	4. 06	. 295	

obtained in various parts of Seriland. The structure of the ware reveals no trace of coiling or other building process, nor does the texture clearly attest the beating process employed by the Papago potters; but there is a well-defined lamellar structure, and the surfaces (especially inner) are striated circumferentially or spirally in such manner as to suggest a process of rubbing under considerable pressure. All the specimens are so asymmetric as to indicate the absence of mechanical devices approaching the potter's wheel, while the necks are of such size as to admit the hand and forearm of an adult female but not of a warrior. Some suggestion of the manufacturing process is afforded by miniature fetishistic and mortuary specimens, such as those depicted in figures 17 and 18, and the larger specimens shown in figure 39, which were evidently shaped from lumps of suitable clay first hollowed and then gradually expanded by manipulation with the fingers, with little if any aid from implements of any sort. On putting the various indi-

¹In this table the ratio is expressed by the weight in kilograms for each liter in capacity. The Papago and Pueblo specimens were selected from typical material in the National Museum and at random, save that in the Pueblo ollas choice was made of specimens corresponding approximately in size with those of the Seri.

cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

Ordinarily women are the water-bearers, each carrying an olla

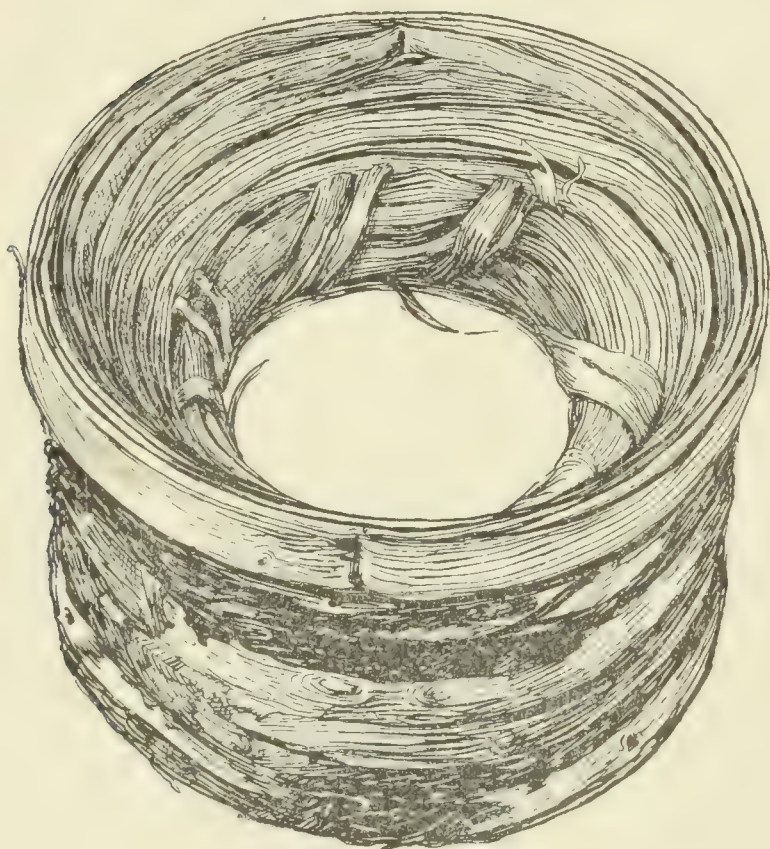


FIG. 15—Seri olla ring.

balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the

Chinese coolie fashion (this device being apparently accultural).

The function of the conventional Seri olla is exclusively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

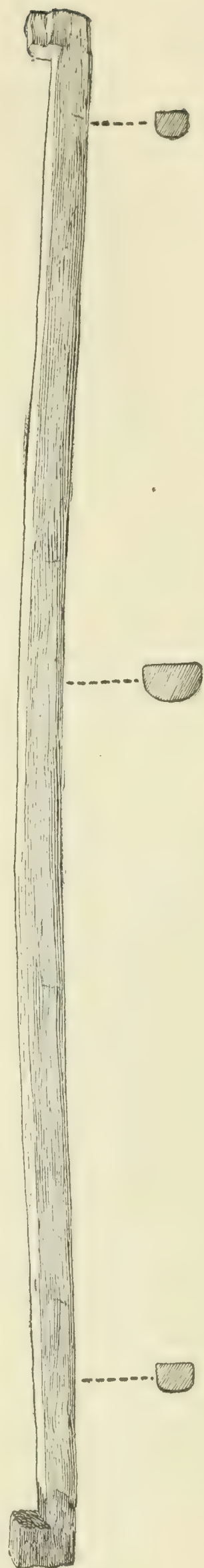


FIG. 16—Water-bearer's yoke.

dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose.

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighbor-

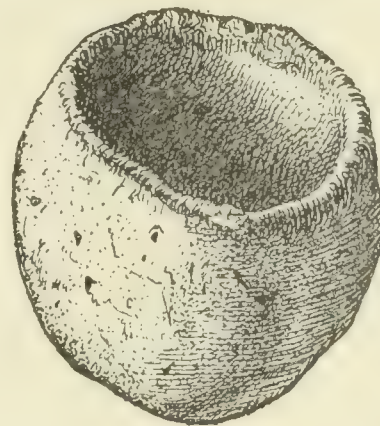


FIG. 17—Symbolic mortuary olla.



FIG. 18—Symbolic mortuary dish.

ing tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-*

sizii), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

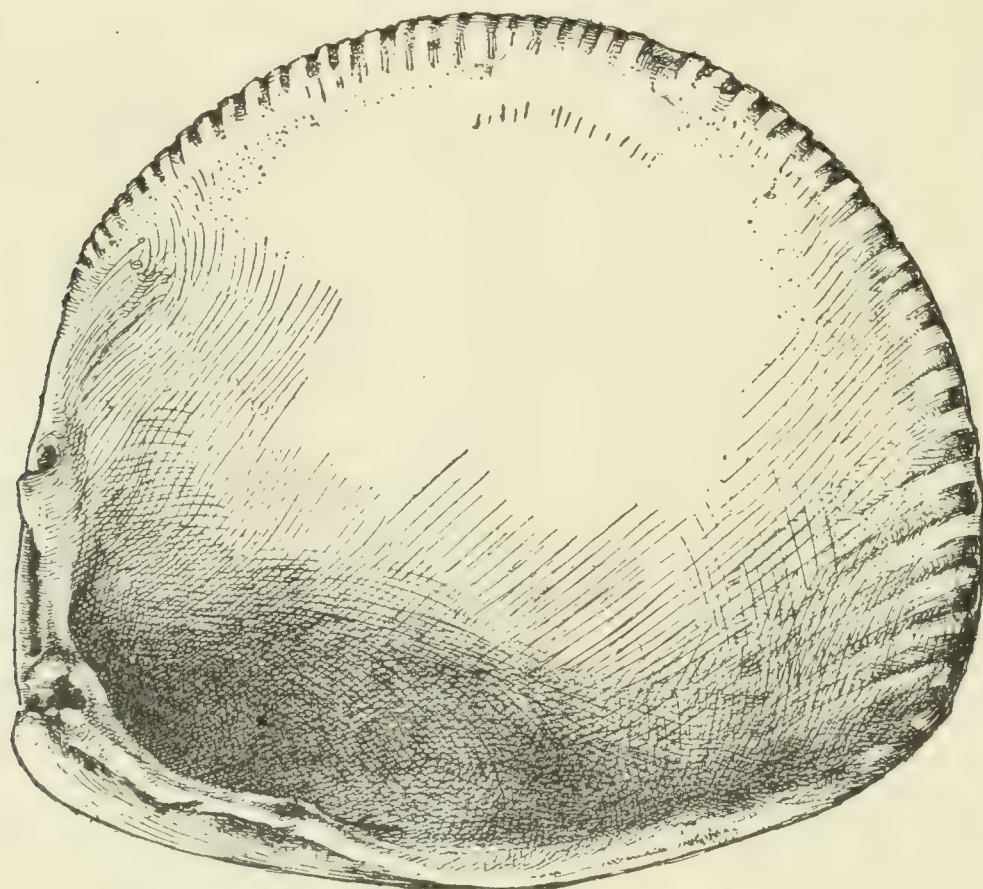


FIG. 19—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carnivorous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an inimical com-

munalty something like that of Siouan Indian and buffalo in olden time, whereby both may benefit and whereby the more intelligent communal certainly profits greatly. The flesh of the turtle yields food; some of its bones yield implements; its carapace yields a house covering, a convenient substitute for umbrella or dog-tent, a temporary buckler, and an emergency tray or cistern, as well as a comfortable cradle at the beginning of life and the conventional coffin at its end; while the only native foot-gear known is a sandal made from the integument of a turtle-flipper.

Doubtless the eggs and newly hatched young of the turtle are eaten, and analogy with other peoples indicates that the females are sometimes captured at the laying grounds or on their way back to water; but observation is limited to the taking of the adult animal at sea by means of a specialized harpoon. A typical specimen of this apparatus, as constructed since the introduction of flotsam iron, is illustrated in figure 20. It comprises a point 3 or 4 inches long, made from a nail or bit of stout wire, rudely sharpened by hammering the tip (cold) between cobbles, and dislodging the loosened scales and splinters by thrusts and twirlings in the ground; this is set firmly and cemented with mesquite gum into a foreshaft of hard wood, usually 4 or 5 inches long, notched to receive a cord and rounded at the proximal end; the rounded end of this foreshaft fits into a socket of the main shaft, which may be either a cane-stalk (as shown in the figure) or a section of mesquite root; while a stout cord is firmly knotted about the foreshaft and either attached to the distal portion of the main shaft or carried along it to the hand of the user. The main shaft is usually

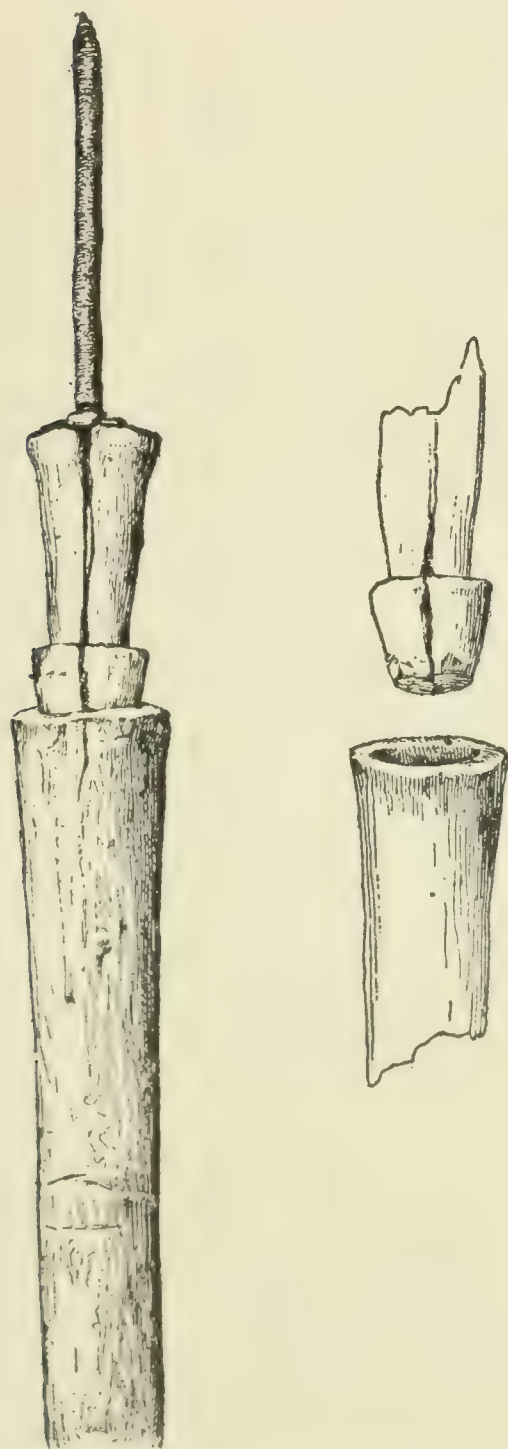


FIG. 20.—Turtle-harpoon.

10 or 12 feet long, with the harpoon socket in the larger end, and is manipulated by a fisherman sitting or standing on his balsa. On catching sight of a turtle lying in the water, he approaches stealthily, preferably from the rear yet in such wise as not to cast a frightening shadow, sets the foreshaft in place, guides the point close to the carapace, and then by a quick thrust drives the metal through the shell. The frictional resistance between the chitin and the metal holds the point in place, and although the foreshaft is jerked out at the first movement of the transfixed animal the cord prevents escape; and after partial tiring

the turtle is either drowned or driven ashore, or else lifted on the craft.¹ Immediately on landing the quarry, the plastron is broken loose by blows of the *hupf*² and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the *hupf*, tearing other tissues with teeth and nails, mouthing shreds from the shells, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety. If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of reeking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvias, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

¹ A lively and explicit account of Seri turtle-fishing appears in Hardy's *Travels in the Interior of Mexico*, 1829, pp. 296-297: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arnold's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, elastic pole of about 12 or 14 feet in length, the wood of which is the root of a thorn called mesquite, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an acorn, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the *ball* and *cup* are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

"A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. No sooner does the creature feel itself transfixed than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hoisted on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

²The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see *postea*, p. 235); the designation is mimetic, or onomatopoetic, from the sound of the stroke, particularly on animal tissue.

monly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and cutlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.¹

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle-fishing

¹ These details were furnished largely by Mashém and Señor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894; and they were corroborated by observations on both shores of El Intiñillo and Bahía Kunkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 20), the still bloody and greasy hupf (that represented in plate LIV), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

during premetal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i.e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tassne, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

vivacity awakened in the Seri bystanders by their spokesman's frequent interlocations with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this fleshly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus.

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla Patos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of Punta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf.

Probably second in importance among Seri prey, as a food-source merely, stand the multifarious fishes with which the waters of Seriland teem, particularly if the class be held to comprise the cetaceans and seals and selachians ranked as leaders of the fish fauna in Seri lore.

Naturally, whales lie outside the ordinary range of Seri game, yet they are not without place in the tribal economy. During the visit to the Seri rancheria near Costa Rica in 1894, it was noted that various events--births, deaths, journeys, etc--were referred to "The Time of the Big Fish"; and it was estimated from apparent ages of children and the like that this chronologic datum might be correlated roughly with the year 1887. The era-marking event was memorable to Mashém, to the elderwomen of the Turtle clan, and to other mature members of the group, because they had been enabled thereby to dispense with hunting and fishing for an agreeably long time, and because they had moved their houses; but the providential occurrence was not interpreted at the time. On visiting Isla Tiburon in 1895, the interpretation became clear; along the western shore of Rada Ballena, near the first sand spit north of the bight, lay the larger bones of a whale, estimated from the length of the mandibles and the dimensions of the vertebræ to have been 75 or 80 feet long. It was evident that the animal had gone into the shoal water at exceptionally high tide and had stranded during the ebb; while the condition of the bones suggested an exposure to the weather of perhaps half a dozen years. On the shrubby bank above the beach, hard by the bleaching skeleton, stood the new rancheria, the most extensive seen in Seriland, comprising some fifteen or twenty habitable jacales; and fragments of ribs and other huge bones about and within the huts¹ attested transportation thither after the building, while the shallowness of the trails and the limited trampling of the fog shrubbery gave an air of freshness to the site and surroundings. The traditions and the relics together made it manifest that "The Time of the Big Fish" had indeed marked an epoch in Seri life; that when the leviathan landed (whether through accident or partly through efforts of balsa-men) it was quickly recognized as a vast contribution to the Seri larder; and that some of the clans, if not the entire tribe, gathered to gorge first flesh and blubber, next sun-softened cartilage and chitin, and then epiphyses and the fatter bones. Some of the ribs were splintered and crushed, evidently by blows of the hupf, in order to give access to the cancellate interiors; several of the vertebræ were battered and split, and nearly all of the bones bore marks of hupf blows, aimed to loosen cartilaginous attachments, start epiphyses, or remove spongy and greasy processes. Little trace of fire was found; in one case a mandible was partly scorched, though the burning appeared to be fortuitous and long subsequent to the removal of the flesh; and a bit of charred and gnawed epiphysis, much resembling the fragments of half-cooked turtle plastron scattered over Seriland, was picked up in

¹ One of the smaller vertebræ and part of a rib are shown in the upper figure of plate VI.

one of the huts. The condition of the remains and the various indications connected with the rancheria corroborated the tradition that the great creature had afforded unlimited and acceptable food for many moons; and various expressions of the tradition indicated that the event, though the most memorable of its class, was not unique in Seri lore.

A few bones and fragments of skin of the seal were found in and about the rancherias on Isla Tiburon, and an old basket rebottomed with sealskin was picked up in a recently abandoned jacal on Rada Ballena; a few bones provisionally identified with the porpoise (which haunts Boco Infierno in shoals) were also found amid the refuse about the old rancheria at the base of the long sand-spit terminating in Punta Tormenta; but nothing was learned specifically concerning the chase and consumption either of these animals or of the abundant sharks from which the island is named.

Among the exceedingly limited food supplies brought from the coast by the Seri group at Costa Rica in 1894, were rank remnants of partly desiccated fish, usually gnawed down to heads and tails; and Mashém and others spoke of fish as a habitual food, while Señor Encinas regarded it as the principal element of the tribal dietary. The harder bones and heavier scales of several varieties of fish were also found abundantly among the middens of both mainland and Tiburon shores in 1895. None of the remains bore noticeable traces of fire; and all observations, including those of Señor Encinas, indicate that the smaller varieties of fish are habitually eaten raw, either fresh or partially dried, according to the state of appetite at the time of taking—or the condition of finding when picked up as beach flotsam. But a single piscatorial device was observed, i. e., the barbed point and foreshaft, shown in figure 21—the iron point being, of course, accultural, and probably obtained surreptitiously. This harpoon, which measures 6 inches in length over all, is designed for use in connection with the main shaft of a turtle-catching tackle; and it is evidently intended for the larger varieties, perhaps porpoises or sharks. In 1827 Hardy observed a related device:



FIG. 21—Fish-spearhead.

They have a curious weapon which they employ for catching fish. It is a spear with a double point, forming an angle of about 50° . The insides of these two points, which are 6 inches long, are jagged, so that when the body of a fish is forced between them, it can not get away on account of the teeth.¹

Don Andrés Noriega, of Costa Rica, described repeatedly and circumstantially a method of obtaining fish by aid of pelicans, in which a

¹ Travels, p. 290.

young or crippled fowl was roped to a shrub or stone, to be fed by his fellows; when at intervals a youth stole out to rob the captive's pouch. At first blush this device would seem to rise above the normal industrial plane of the Seri and to lie within the lower stages of zooculture, like the cormorant fishing of China if not the hawking of medieval Europe; yet on the whole it may be deemed fairly consistent with that cruel yet mutually beneficial toleration between tribesmen and pelicans attested by the preservation of the avian communal, as already noted. Moreover, Don Andrés' observations are in accord with early notes of the exceedingly primitive aborigines of California, from whom the Seri have undoubtedly borrowed various cultural suggestions; thus Venegas quotes Padre Torquemada as saying:

I accidentally found a gull tied with a string and one of his wings broke. Around this maimed bird lay heaps of excellent pilchards, brought thither by its companions; and this, I found, was a stratagem practiced by the Indians to procure themselves a dish of fish; for they lie concealed while the gulls bring these charitable supplies, and when they think that little more is to be expected they seize upon the contributions.

The padre says also of these gulls that "they have a vast craw, which in some hangs down like the leather bottles used in Peru for carrying water, and in it they put their captures to carry them to their young ones"—from which it is evident that he refers to the pelican. Venegas adds, "Such are the mysterious ways of Providence for the support of his creatures!"¹ And in the margin of his accompanying "Mapa de la California", he introduces a vigorous picture of a captive fowl, its free fellow, and the mess of fish, the cut being headed "Alcatrazes" (pelicans).

Despite these devices, the dearth of fishing-tackle among the Seri is evidently extreme. Save in the single specimen figured, no piscatorial apparatus of any sort was found among the squalid but protean possessions at the Costa Rica rancheria; neither nets nor hooks nor rods nor lines nor any other device suitable for taking the finny game were found in the scores of jacales containing other artifacts on Tiburon; while Señor Encinas was conversant only with the simple method of taking fish by hand from the pools and shallows left by receding breakers or ebbing tides. This dearth of devices is significantly harmonious with other Seri characteristics: it accords with the leading place assigned the turtle in their industry and their lore; it is in harmony with that primitive and nonmechanical instinct which leads them to rely on bodily strength and skill and swiftness rather than on extracorporeal artifacts in their crude and incomplete conquest of nature; and it is a manifest expression of relation with their distinctive physical environment—for the ever-thundering breakers of their gale-swept coast are abundant, albeit capricious, bringers of living grist, while the offshore gales at low tide lay bare hundreds of acres of shoaler

¹ History of California, 1759, vol. 1, p. 41.

bottoms literally writhing with fishes stranded among beds of mollusks and slimy with the abounding plankton of a fecund coast. The region is one of ample, albeit lowly, food supply, where every experience tends toward inert reliance on providential chance, and where the stimulus of consistently conscious necessity seldom stirs the inventive faculty.

Closely connected with fish as a Seri food-source are the various molluscan and crustacean forms collectively called shellfish; and these contribute a considerable share of the sustenance of the tribe.

Apparently the most important constituent of this class of foods is the Pacific coast clam, which abounds in the broad mud-flats bordering Laguna La Cruz and other lagoons of Seriland, and which was still more abundant during a subrecent geologic epoch, to judge from the immense accumulation of the shells in Punta Antigualla. The clams are usually taken at low tide, without specialized apparatus. They are located by feeling with the feet in shallow water, and caught either with toes or with fingers, to be tossed into any convenient receptacle. When the water is entirely withdrawn from the flats, they are located by means of their holes, and are extricated either with a shell-cup or with some other improvised implement. Frequently the entire mess is thrown into a fire until the shells open, when they are withdrawn and the mollusks devoured practically raw; perhaps more commonly the shells are opened by blows of the hupf, and eaten without semblance of cooking; and, except on the surface, no trace of roasting was found among the vast accumulations of shells in Punta Antigualla.

Perhaps second to the clam in frequency of use is the local oyster, which abounds about the more sheltered shores of Tiburon. It is gathered with the hands, aided perhaps by a stone or stick for dislodging the shells either from the extended offshore beds at extreme low water, or from the roots of a mangrove-like shrub at a medium stage. The shells, like those of the clam, are frequently opened by partial roasting; and shells, sometimes scorched, are extensively scattered over the interior, indicating that the oyster is a favorite portable food. The popularity of this bivalve is shared by the Noah's-ark (*Arca*), to which some mystical significance is apparently ascribed; and the abundant limpets and bivalves and other mollusks are eaten indiscriminately, to judge from the abundance of their shells in the middens. The ordinary crab, too, is a favorite article of food, and its claws are numerous in camp and house refuse; while the lobster-like deep-water crab is introduced into the menu whenever brought to the surface by storms, as shown by its massive remains in the middens.

On the whole, shellfish form a conspicuous factor in Seri economy by reason of the considerable consumption of this class of food; but, viewed in the broader industrial aspect, the produce is notably primitive, and significant chiefly as indicating the dearth of mechanical and culinary devices.

While by far the larger share of Seri sustenance is drawn from the sea, a not inconsiderable portion is derived from the land; for the warriors and striplings and even the women are more skilful hunters than fishers.

The larger objects of the feral chase are deer of two or three species (the bura, or mule-deer, being most conspicuous and easiest taken), antelope, and mountain sheep; to which the puma, the jaguar, and perhaps two or three other carnivores might be added. The conventional method of taking the bura and other deer is a combination of stalking and coursing, usually conducted by five of the younger warriors, though three or four may serve in emergency; any excess over five being regarded as superfluous, or as a confession of inferiority. The chase is conducted in a distinctly ceremonial and probably ritualistic fashion, even when the finding of the game is casual, or incidental to a journey: at sight of the quarry, the five huntsmen scatter stealthily in such manner as partially to surround it; when it takes fright one after the other strives to show himself above the shrubbery or dunes in order to break its line of flight into a series of zigzags; and whether successful in this effort or not they keep approximate pace with it until it tires, then gradually surround it, and finally rush in to either seize it in their hands or cripple it with clubs—though the latter procedure is deemed undignified, if not wrong, and hardly less disreputable than complete failure. When practicable the course is laid toward the rancheria or camp; and in any event the ideal finish is to bring the animal alive into the family group, where it may be dissected by the women, and where the weaklings may receive due share of the much-prized blood and entrails. The dissection is merely a ravenous rending of skin and flesh, primarily with the teeth (perhaps after oblique bruising or tearing by blows with the hupf over strongly flexed joints), largely with hands and fingers aided anon by a foot planted on the carcass, and partly with some improvised device, such as a horn or tooth of the victim itself, the serrated edge of a shell-cup, or perhaps a sharp-edged cane-splint from a broken arrow carried for emergency's sake. Commonly the entire animal, save skin and harder bones, is gulped at a sitting in which the zeal of the devotee and the frenzy of the carnivore blend; but in case the group is small and the quarry large, the sitting is extended by naps or prolonged slumberings, and the more energetic squaws may even trouble to kindle a fire and partially cook the larger joints, thereby inciting palled appetite to new efforts. Finally the leg bones are split for the marrow and their ends preserved for awls; the horns are retained by the successful huntsmen as talisman-trophies; while the skin is stretched in the desert sun, scratched and gnawed free of superfluous tissue, rubbed into partial pliability, and kept for bedding or robe or kilt.

The chase of the hare is closely parallel to that of the deer save that it is conducted by striplings, who thereby serve apprenticeship in hunt-

ing and at the same time enrich the tribal larder with a game beneath the dignity of the warriors; while still smaller boys similarly chase the rabbit, which is commonly scorned by the striplings. The conventional hare-hunting party is three, and it is deemed disreputable to increase this number greatly. The youths spread at sight of the game and seek to surround it, taking ingenious and constant advantage of the habit of the hare to run obliquely or in zigzags to survey more readily the source of its fright; for some time they startle it but slightly by successive appearances at a distance, but gradually increase its harassment until it bounds hither and thither in terror, when they rapidly close in and seize it, the entire chase commonly lasting but a few minutes. The quarry is customarily taken alive to camp, where it is quickly rent to fragments and the entrails and flesh and most of the bones consumed; the skin usually passes into possession of a matron for use as infantile clothing or cradle bedding, while the ears are kept by the youth who first seized the game until his feat is eclipsed by some other event—unless chance hunger sooner tempts him to transmute his trophy into pottage.

While the collective, semiceremonial style of chase alone is thoroughly good form in Seri custom, it is often rendered impracticable by the scattering of the tribe in separate families or small bands, in which case the bura and its associates, like the larger carnivores customarily, are taken by strategy rather than by strength. This form of chase is largely individual; in it archery plays a leading rôle; and in it, too, ambuscade, stealthy lying in wait, and covert assault attain high development. It is closely analogous with the warfare typical of the tribe; and it is especially noteworthy as one of the most effective stimuli to intellectual activity, and hence to the development of invention—if the term may be applied to industrial products so lowly as those of the Seri.

The chief artifact produced by the strategic chase on land would seem to be the analogue of the harpoon used at sea, i. e., the arrow. This weapon is one of the three or four most highly differentiated and thoroughly perfected of the Seri artifacts, ranking with canteen-olla and balsa, and perhaps outranking the turtle-harpoon. It is fabricated with great care and high skill, and with striking uniformity in details of material and construction. A typical example is 25 inches in length and consists of three pieces—point, foreshaft, and main shaft (feathered toward thenock). The foreshaft is $8\frac{1}{2}$ inches long, of hard wood carefully ground by rubbing with quartzite or pumice into cylindrical form, about three-eighths of an inch in diameter at the larger end and tapering slightly toward the point; the larger end is extended by careful grinding into a tang which is fitted into the main shaft, the joint being neatly wrapped with sinew. This main shaft is a cane-stalk (*Phragmites communis*?) 15 or 16 inches long, carefully selected for size and well straightened and smoothed; it is feathered with three equidistantly-

placed wing-feathers of hawk or falcon, neatly prepared by removing a thin strip of the rachis bearing the wider vexillum and attaching it by sinew wrappings at both ends, the feathers being about $5\frac{1}{2}$ inches in length. The nock is a simple rounded notch, placed just below a joint and supported by the sinew ferrule; there is no foot-plug. The favorite point is a bit of flotsam hoop-iron, ground into elongate triangular shape with projecting barbs, and a short tang or shank fitted into a shallow notch in the foreshaft, cemented there with mesquite gum, and finally fixed firmly with sinew wrappings. A typical iron-point arrow, with bow and quiver, is depicted in plate XXX. Alternative points are of rudely chipped stone (two examples are illustrated in figure 37) somewhat clumsily attached to the foreshaft by mesquite gum and sinew wrapping; while the arrows used by boys and hunters of small game are usually pointless, the tip of the foreshaft being sharpened and hardened by slight charring. In some of the arrows, especially those designed for use in war, the foreshaft is notched, or else loosely attached to the main shaft, in order that it may be detached from the main shaft and remain in the body of enemy or prey. The foreshaft is commonly painted some bright color (red is prevalent), while the points and attachments of the "poisoned" specimens are smeared with some greasy substance.

The aboriginal Seri arrow has undoubtedly been modified during the centuries since the coming of Cortés and Mendoza with their metal-armed troopers; yet certain inferences as to the indigenous form of the weapon are easily drawn from its construction and the homologies of its parts.

The first feature of the artifact to attract attention is the relative clumsiness of attachment and frequent absence of points. The chipped-stone points are so rude as to be quite out of harmony with the otherwise delicately wrought and graceful arrow, while the attachment is strikingly rude; and it is still more noteworthy that the very name for stone arrowpoint was little understood at Costa Rica, and was obtained only after extended inquiry and repeated conferences among the older informants. Even the attachment of the effective points made from hoop-iron is bad constructionally; the sinew wrapping is carried around the entire blade in such manner as to sheathe the sharply ground edges and itself be cut on contact with firm tissue; and the fitting and wrapping are so rude as to be incongruous with the rest of the apparatus. On the whole the suggestion is strong that the arrowpoint is accultural—and this suggestion is further strengthened by the very existence of the practically functionless, and hence manifestly vestigial, hard-wood foreshaft. Turning to the structural homologies, the observer is at once struck with the parallelism running through the three most conspicuous compound artifacts found among the Seri, i. e., the harpoon, the fire-drill, and the arrow. All of these alike consist of two essential parts, main shaft and foreshaft; all are

akin in function even in the superficial view of the Caucasian, and are much more closely related in primitive thought—indeed the fire-drill is but a featherless andnockless arrow, with the foreshaft charred at its fire-giving tip; and all are closely linked in language and allied with other terms in such wise as practically to establish identity among them in the thinking of their lowly makers (though unfortunately the incomplete vocabularies extant are insufficient for full study of the linguistic homologies). Briefly the indications are that the harpoon was the primary device, and that its foreshaft was a tooth of an aquatic fish-eater like the seal, or perchance in some cases an os penis; that its lineal successor was a loose-head lance for use on sea and land, at first with the unaided hand and later with the atlatl, or throwing-stick (the lance being now extinct, though recorded by early visitors to Seriland); that the next artifact-generation in the direct line was represented by the arrow, foreshafted with hard wood or tooth, made light and graceful and loose-headed or not, according to needs, and by the substitution of bow for atlatl; and that a somewhat aberrant line was marked by the taming of fire, its reproduction by the modified arrow, and the differentiation of fire-stick from arrow and either atlatl or bow.

In tracing these stages in technologic growth, it is to be remembered that the Seri are so primitive as to betray some of the very beginnings of activital concepts; that to them zoic potencies are the paramount powers of the cosmos; that in their simple thought fire is a bestial rather than a physical phenomenon; that in their naive philosophy the production of devouring flame is of a kind with vital birth and a similitude of sexual reproduction; and that according to their notions the conquest of quarry, including fire, is made practicable only by aid of the mystical potencies of beasts and flames gained through invocatory use of symbols or actual organs.

In the Seri tongue the term "fire-drill" is *kaak*, an indefinite generic meaning "kind" or "strong kind", with an egocentric connotation ("Our-Strong-Kind"), as in the proper tribal designation *Kun-kaak* or *Km-kaak*; while the term for the nether fire-stick or hearth is either *maam* ("woman", or more properly "mother"), or else (and more commonly) *kaak-maam*, which may be rendered "Kind-Mother"—the "Kind", as among primitive folk generally, comprising both men and tutelary beasts, and in this case fire as the most mysterious of the beasts; there is thus a suggestive analogy between the designation for the fire-producing apparatus and that for the tribe itself. It should be noted that the zoic concept of fire is widespread among the more primitive peoples of various provinces, and sometimes persists in recognizable form in higher culture (witness the fire-breathing dragons of various mythologies, the "Red Flower" notion gathered in India by Kipling, etc); also that the ascription of sex to the fire sticks is prevalent among North American tribes, and at once helps to interpret the development of the fire-drill, fire-syringe, and other primitive devices, such, for example, as

those so fully described by Hough,¹ and serves to explain the otherwise obscure genesis of the fire-sense, which must have accompanied and shaped that most significant of all steps in human progress, the conquest of fire.

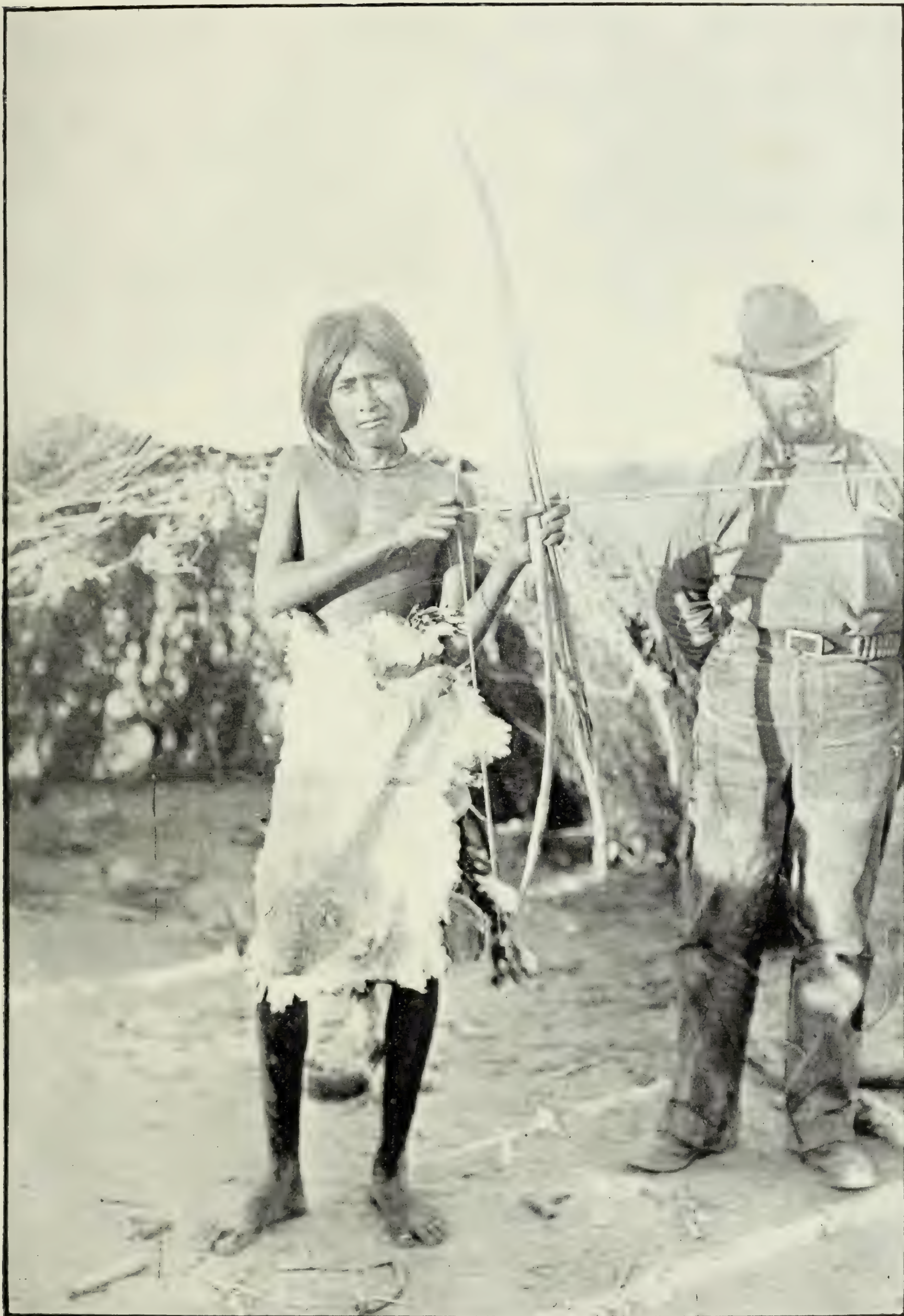
The modern coordinate of the Seri arrow is the bow, made preferably from a straight and slender branch of the palo blanco. A typical specimen is illustrated in plate XXX; it is 4 feet 9½ inches long, with the outer face convex and the inner face flat; greatest width 1¾ inches, narrowed to 1½ inches at the hand-hold; thickness at the hand-hold 1 inch, thinning to five-eighths inch at 8 inches from this point; tapering gradually in both dimensions toward the extremities, which are rudely notched to receive the cord (of mesquite-root fiber). The specimen illustrated has been cracked and repaired in two places; in one place the repair was effected by a rough wrapping of sinew, and in the other by slipping over the wood a natural sheath of rawhide from the leg of a deer. The specimen is of added interest in that it combines bow and nether fire-stick ("Strong-Kind-Mother"), one of the friction holes being worn out to the notched margin, and the other remaining in usable condition, as shown in the enlarged marginal drawing.²

Compared with the delicately finished and graceful arrow, the typical bow is a rude and clumsy device; it displays little skill in the selection and shaping of material, and evidently involves little labor in manufacture—indeed, the indications are that more actual labor is spent in the construction of a single arrow than in the making of a bow, while the arrow-making is expert work, betokening craft of a high order, and the bow-making little more than simple handiwork of the lowest order. The comparison affords some indication of the genesis of Seri archery, and at the same time corroborates the independent suggestion that the arrow is of so much greater antiquity than the bow as to represent a distinct stage in cultural development—though the precise cultural significance of the bow is not easily ascertained.

Efforts were made to have different Seri warriors at Costa Rica in 1894 assume the normal archery attitude, with but moderate success, the best pose obtained (illustrated in plate XXVIII) being manifestly unnatural and a mere reflection of the attitude in the mind of the Caucasian poser; while the results of inquiries served only to indicate that the normal archery attitude was purposely avoided for reasons not ascertained. Fortunately another observer was more successful: in the course of the United States hydrographic surveys in 1873, Commander (now Admiral) Dewey received several visits from Seri warriors on board the *Narragansett*; and on the occasion of one of these visits, Mr Hector von Bayer, of the hydrographic party, caught a photograph of an archer in the act of drawing his bow. The negative was accident-

¹ Fire-making apparatus in the U. S. National Museum; Smithsonian Report for 1888, pt II, 1890, pp. 531-587, and elsewhere.

² Ordinarily the nether fire-stick is of soft and porous wood, flotsam palm-wood and water-logged pine being preferred.



SERI ARCHER AT REST

ally shattered, and no prints are known to have been made from it; but the fragments were carefully joined, and were kindly transferred to the Bureau by Mr Von Bayer in 1897, and from them plate XXIX was carefully drawn. The posture (partly concealed by the drapery) is extraordinary, being quite beyond the reach of the average human, and impossible of maintenance for any considerable interval even by the well-wonted Seri. The posture itself partly explains the difficulty of inducing the warriors at Costa Rica to assume it, since it is essentially a fleeting one, and indeed but a part of a continuous and stressful action—it is no less difficult to assume, or to catch in the camera, than the typical attitude of a baseball pitcher in action. The posture thus fortunately caught is quite in accord with the accounts of Seri archery from the esoteric side given by Mashém, and with the exoteric observations of Señor Encinas, Don Andrés, and others; for all accounts agree in indicating that the archer commonly rests inert and moveless as the watching feline up to a critical instant, then springs into movement as swiftly as the leaping jaguar, and hurls, rather than shoots, one, two, or three arrows before rushing in to the death or skulking to cover as the issue may require.

The Seri archery habit is in every way consistent with the general habits of the tribe, alike in the chase and in warfare, in which the tribesmen, actuated by the fierce blood-craze common to carnivores, either leap on their prey with purpling eyes and gnashing teeth, or beat quick and stealthy retreat; and it is especially significant in the light thrown on the bow as a device for swift and vigorous rather than accurate offense, an apparatus for lengthening the arm still more than does the harpoon, and at the same time strengthening and intensifying its stroke. The quick-changing attitudes of half hurling are equally suggestive of the use of the atlatl, and support Cushing's hypothesis¹ that the bow was derived from the corded throwing-stick. While the critical posture of Seri archery is unique in degree if not in kind in the western hemisphere, so far as is known, an approximation to it (illustrated in fig. 22) has been observed in Central Africa.² On the whole the Seri mode of using the bow, like its crude form and rude finish, indicates that it is a relatively new and ill-developed artifact, possibly accultural though more probably joined indigenously with the archaic arrow to beget a highly effective device for food-getting as well as for warfare; while the genetic stages are still displayed not only in the homologies between arrow and harpoon, but by the common functions of both arrow and bow with the fire-sticks.

Concordantly, as indicated by the use of the archery apparatus, the individual taking of large game is effected either by stealthy stalking or by patient ambushade ended by a sudden rush; when, if the chase is successful, the quarry is rent and consumed as at the finish of the

¹ The Arrow: Proceedings Am. Ass. Adv. Sci., vol. XLIV, 1895, pp. 232-240.

² Glave's Journey to the Livingston Tree, The Century Magazine, vol. LII, 1896, p. 768.

semiceremonial collective chase. The fleet but wary antelope, the pugnacious peccary, the wandering puma and jaguar, and the mountain sheep of the rocky fastnesses, are among the favorite objects of this style of chase; while the larger land birds and some of the water-fowl are taken in similar fashion.

The smaller land game comprises a tortoise or two, all the local

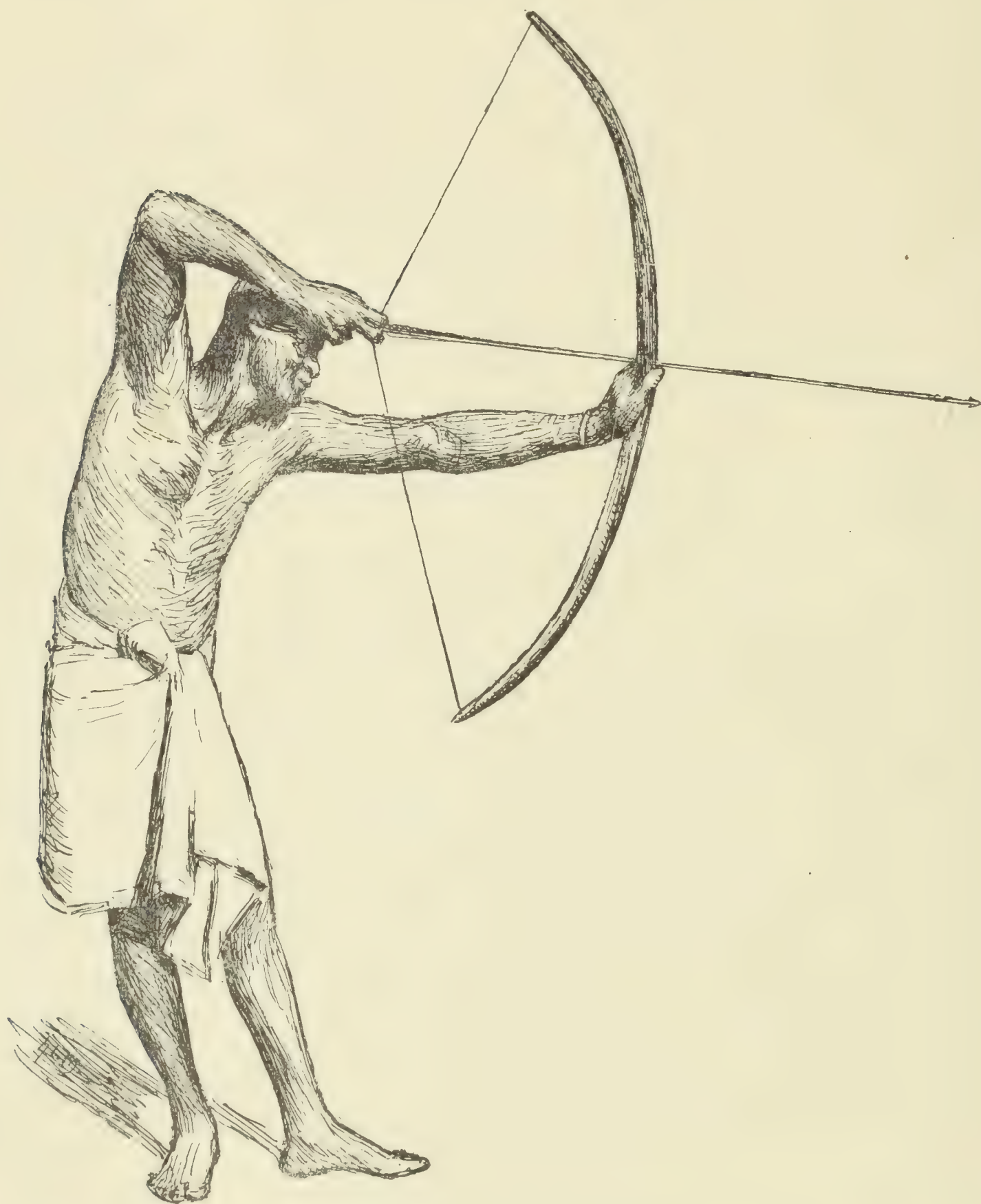


FIG. 22—African archery posture.

snakes and lizards, and a good many insects, besides various birds, including hawks and owls, as well as the eaters of seeds and insects. The crow and vulture are also classed as edible, though they are rare in Seriland, probably because of the effective scavengering of the province by its human residents. It is a significant fact that the



SERI ARCHER AT ATTENTION

smaller rodents, especially the long-tail nocturnal squirrel, are excluded from the Seri menu by a rigidly observed tabu of undiscovered meaning. A general consequence of this tabu is readily observed on entering Seriland; there is a notable rarity of the serpents, the high-colored and swift efts, and the logy lizards and dull phrynosomas so abundant in neighboring deserts, as well as of song birds and their nests; and this dearth is coupled with a still more notable abundance of the rodents, which have increased and multiplied throughout Seriland so abundantly that their burrows honeycomb hundreds of square miles of territory. A special consequence of the tabu is found in the fact that the myriad squirrel tunnels have rendered much of the territory impassable for horses and nearly so for pedestrians, and have thereby served to repel invaders and enable the jealous tribesmen to protect their principality against the hated alien. Seriland and the Seri are remarkable for illustrations of the interdependence between a primitive folk and their environment; but none of the relations are more striking than that exemplified by the timid nocturnal rodent, which, protected by a faith, has not only risen to the leading place in the local fauna, but has rewarded its protectors by protecting their territory for centuries.

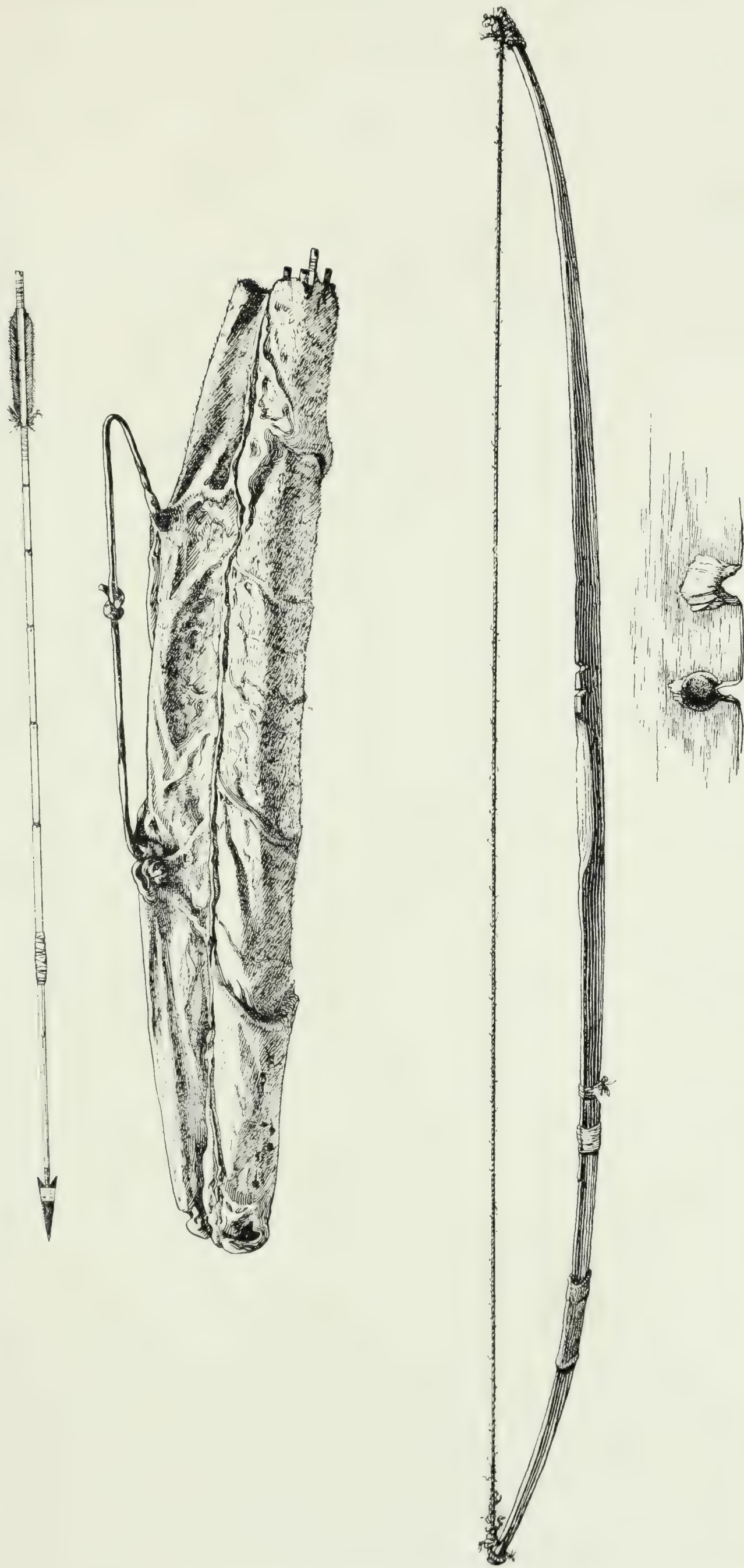
In both the collective and the strategic chase, constant advantage is taken of weakness and incapacity, whether temporary or permanent, of the prospective quarry; so that diseased and wounded as well as sluggish and stupid animals are eliminated. The effect of this policy on the fauna is undoubtedly to extinguish the less capable species and to stimulate and improve the more capable; i. e., the presence of the human factor merely intensifies the bitter struggle for existence in which the subhuman things of this desert province are engaged. At the same time, the entrance of the human folk into the struggle characteristic of subhuman species serves to bar them from one of the most helpful ways to the advancement of their kind—i. e., the way leading through cotoleration with animals to perfected zooculture. The most avidly sought weaklings in the Seri chase are the helpless young, and the heavily gravid dams which are pursued and rent to fragments with a horrid fury doubtless reflecting the practical certainty of capture and the exceptionally succulent tidbits afforded by the fetal flesh; naturally the cruel custom reacts on habitual thought in such wise that the very sight of pregnancy or travail or newborn helplessness awakens slumbering blood-thirst and impels to ferocious slaughter. To such custom and deep-planted mental habit may be ascribed some of the most shocking barbarities in the history of Seri rapine, tragedies too terrible for repetition save in bated breath of survivors, yet explaining the utter horror in which the Seri marauder is held on his own frontier. At the same time the hunting custom and the mental habit explain the blindness of the Seri to the rudiments of zooculture, and clarify their intolerance of all animal associates, save the sly coyote that habitually

hides its travail and suckling in the wilderness, and perhaps the deified pelican.¹

Parallel to the chase of the larger land game is the hunting of horses and other imported stock; for the animals are regarded in no other light than that of easy quarry. The horses of the Seri frontier, like those of wild ranges generally, are strongly gregarious, and the herds are well regimented under recognized leaders, so that the chase of their kind is necessarily collective on the part of both hunters and game; and the favorite method is for a considerable group of either warriors or women to surround the entire herd, or a band cut out from it, "mill" them (i. e., set them running in a gradually contracting circle) and occasionally dash on an animal, promising by reason of exceptional fatness or gravidness. The warrior's customary clutch is by the mane or foretop with one hand and the muzzle with the other, with his weight thrown largely on the neck, when a quick wrench throws the animal, and, if all goes well, breaks its neck;² while the huntress commonly aims to stun the animal with a blow from her hupf. In either case the disposition of the carcass is similar to that of other large quarry, save that thought is given to the danger of ensuing attack by vaqueros; so that it is customary to consume at once only the blood and pluck, and if time permits the paunch and intestines with their contents, and then to rend the remainder into quarters, which warriors or even women shoulder and rush toward their stronghold. Burros (which, next to the green turtle, afford the favorite Seri food) and horned cattle are commonly stalked and slain, or, at least, wounded with arrows, so that it is commonly the stragglers that are picked off; though sometimes several animals are either milled or rushed, and thrown by a

¹ A single incident expressing the Seri sentiment toward travailing animals must be noted: a few minutes after the group shown in plate XI was photographed, a starveling cur—a female apparently of nearly pure coyote blood and within a week of term—slunk toward the broken olla-kettle in the left center of the picture, in which a rank horse-foot was simmering; the woman bending over the kettle suddenly straightened and shot out her foot with such force and directness that the cur was lifted entirely over the corner of the nearest jacal, and the poor beast fell stunned and moaning, a prematurely born pup protruding from her two-thirds of its length. The sound of the stroke and fall attracted attention throughout the group; the women smiled and grunted approval of the well-aimed kick, and a dozen children gathered to continue the assault. Partially recovering, the cur struggled to its feet and started for the chapparal, followed by the jeering throng; at first the chase seemed sportive only, but suddenly one of the smaller boys (the third from the left in the group shown in plate XVI) took on a new aspect—his figure stiffened, his jaws set, his eyes shot purple and green, and he plunged into the lead, and just before the harried beast reached cover he seized the protruding embryo, jerked it away, and ran off in triumph. Three minutes afterward he was seen in the shelter of a jacal greedily gorging his spoil in successive bites, just as the Caucasian boy devours a peeled banana. Meanwhile, two or three mates who had struck his trail stood around begging bites and sucking at chance blood spatters on earth, skin, or tattered rags; and as the victor came forth later, licking his chops, he was met by half jocular but admiring plaudits for his prowess from the dozen matrons lounging about the neighboring jacales. Parallel instances, both observed and gathered at second hand, might be added in numbers; but this may suffice as the sole specific basis for the generalization which places the Seri below the plane of possible zooculture—a generalization so broad as to demand some record of data which it would be more agreeable to ignore.

² This warrior's clutch, and the notion that it is discreditable if not criminal for the masculine adult to take recourse to weapons in hand-to-hand slaughter, are strongly suggestive of zoomimic motives and of studied mimicry of the larger carnivores, such as the jaguar—the "neck-twister" of the Maya.



SERI BOW, ARROW, AND QUIVER

strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy hunters.

The quantity of stock consumed by the Seri varies greatly with the policy of *rancheros* and *vaqueros*. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this



FIG. 23—Desiccated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle *rancheros* on the chance visits of Seri bands to the frontier (such as the specimen in the photograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 152-154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Mashém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, paloblanco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction.

There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula.

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an ahst (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty.

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894.

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;¹ it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the rugged sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence,

¹ Cf. The Beginning of Agriculture; The American Anthropologist, vol. VIII, Oct., 1895, pp. 350-375.

chiefly in the form of wounded and dwarfed specimens, seems to indicate that its original range comprised all Seriland; while its dearth suggests destruction nearly to the verge of extinction by improvident generations better armed with their hupfs and harpoons and shell-cups than the subhuman beasts against whom the plant is so well protected.

Aside from the universally used hupf and ahst (which may be regarded as differentiated implements or tools), the only special device used in connection with vegetal food is the basket, or, rather, basketry tray (illustrated in figure 24). This ware is of the widespread coil type so characteristic of southwestern tribes. The coil is a wisp of stems and splints of a fibrous yet spongy shrub, apparently torote; and the woof consists of paloblanco (?) splints deftly intertwined by aid of an awl. The construction is fairly neat and remarkably uniform; the

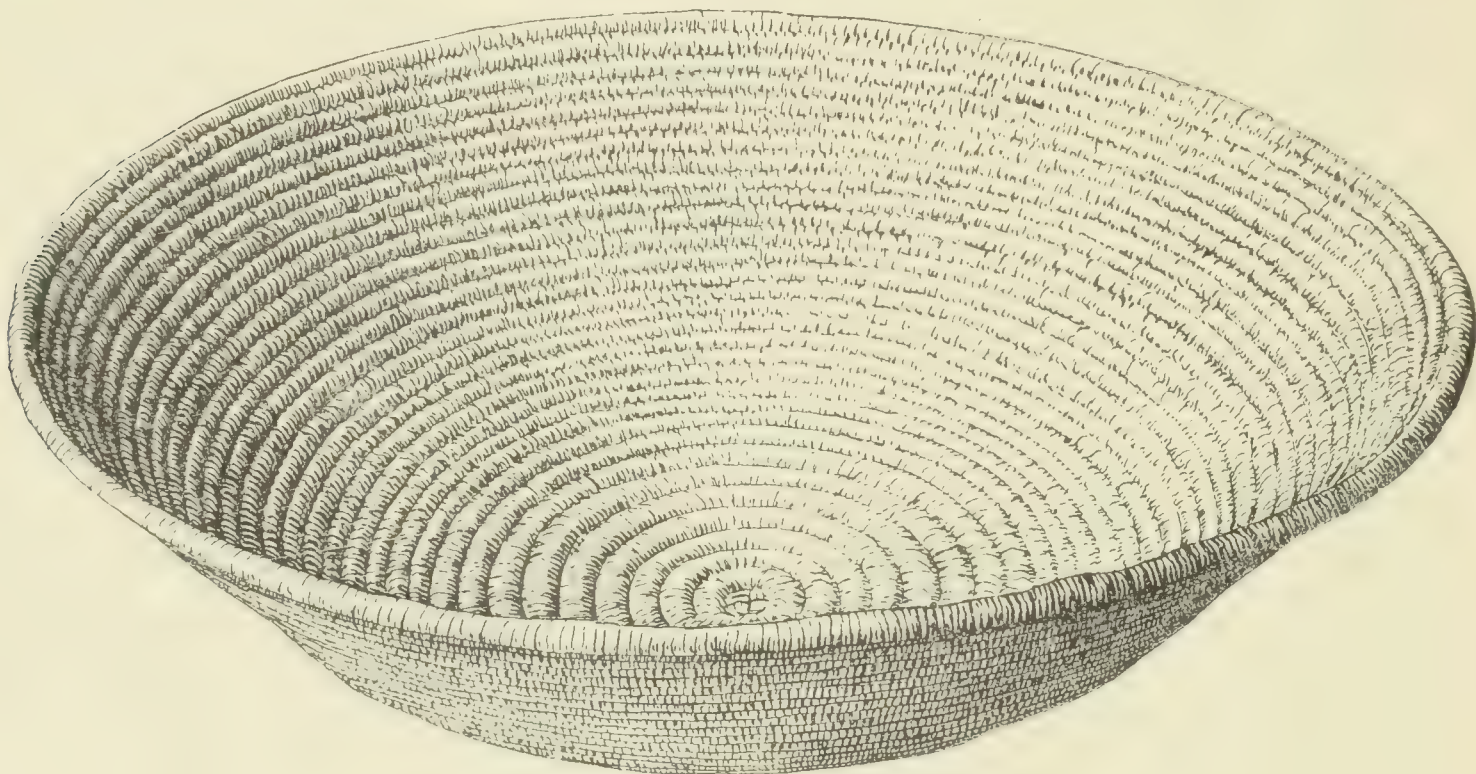


FIG. 24—Seri basket.

coiled wisps vary somewhat in size, both intentionally and inadvertently, ranging from an average of three-eighths of an inch toward the bottoms of the larger specimens to half that diameter in the smaller specimens and toward the margins of the larger. The initial coil starts in an indefinite knot, rather than a button, at the center; and the spiral is continuous throughout, the final coil being quite deftly worked out to a single splint smoothly stitched to the next lower spiral with the woof splints. The ware is practically water-tight, remarkably strong and resilient, and quite durable in the dry climate of Seriland. Ordinarily the basket is abandoned when the bottom decays or breaks, but an ancient specimen obtained on Isla Tiburon was roughly rebottomed with a patch of sealskin attached by means of sinew. The baskets are notably uniform in shape, though the size varies from 8 or 9 inches to fully 17 inches in diameter.

The most striking feature of the Seri basketry, as of the pottery, is

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an accultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

Museum No.	Diameter	Depth	Weight	Capacity
174528	38 cm.(15 in.)	9.5 cm.(3 $\frac{3}{4}$ in.)	482 g.(17 oz.)	6.25 l.(6.6 qt.)
174528a ..	23 cm.(9 in.)	5.0 cm.(2 in.)	142 g.(5 oz.)	1 l.(1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and ahst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Baegert,¹ and others; but it gains importance, among

¹An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Baegert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-369. Baegert's account of foods (pp. 363-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps, now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitabayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during that period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

the Seri at least, as the sole method of storing or preserving food-supplies, and hence as the germ of industrial economy out of which a

familiar to me, who visited me after having fed for three or four weeks on these pitahayas. They do not, however, preserve them, and when the season is over they are put again on short rations. Among the roots eaten by the Californians may be mentioned the yuka, which constitutes an important article of food in many parts of America, as, for instance, in the island of Cuba, but is not very abundant in California. In some provinces it is made into a kind of bread or cake, while the Californians, who would find this process too tedious, simply roast the yukas in a fire like potatoes. Another root eaten by the natives is that of the aloë plant, of which there are many kinds in this country. Those species of this vegetable, however, which afford nourishment—for not all of them are edible—do not grow as plentifully as the Californians might wish, and very seldom in the neighborhood of water; the preparations, moreover, which are necessary to render this plant eatable, require much time and labor. . . . I saw the natives also frequently eat the roots of the common reed, just as they were taken out of the water. Certain seeds, some of them not larger than those of the mustard, and different sorts in pods that grow on shrubs and little trees, and of which there are, according to Father Piccolo, more than sixteen kinds, are likewise diligently sought; yet they furnish only a small quantity of grain, and all that a person can collect with much toil during a whole year may scarcely amount to 12 bushels.

“It can be said that the Californians eat, without exception, all animals they can obtain. Besides the different kinds of larger indigenous quadrupeds and birds, they live nowadays on dogs and cats; horses, asses, and mules; *item*, on owls, mice, and rats; lizards and snakes; bats, grasshoppers, and crickets; a kind of green caterpillar without hair, about a finger long, and an abominable white worm of the length and thickness of the thumb, which they find occasionally in old rotten wood, and consider as a particular delicacy. The chase of game, such as deer and rabbits, furnishes only a small portion of a Californian’s provisions. Supposing that for 100 families 300 deer are killed in the course of a year, which is a very favorable estimate, they would supply each family only with three meals in three hundred and sixty-five days, and thus relieve but in a very small degree the hunger and the poverty of these people. The hunting for snakes, lizards, mice, and field-rats, which they practice with great diligence, is by far more profitable and supplies them with a much greater quantity of articles for consumption. Snakes, especially, are a favorite sort of small game, and thousands of them find annually their way into the stomachs of the Californians.

“In catching fish, particularly in the Pacific, which is much richer in that respect than the Gulf of California, the natives use neither nets nor hooks, but a kind of lance—that is, a long, slender, pointed piece of hard wood—which they handle very dexterously in spearing and killing their prey. Sea-turtles are caught in the same manner.

“I have now mentioned the different articles forming the ordinary food of the Californians; but, besides these, they reject nothing that their teeth can chew or their stomachs are capable of digesting, however tasteless or unclean and disgusting it may be. Thus they will eat the leaves of the Indian fig-tree, the tender shoots of certain shrubs, tanned or untanned leather, old straps of rawhide, with which a fence was tied together for years; *item*, the bones of poultry, sheep, goats, and calves; putrid meat or fish swarming with worms, damaged wheat or Indian corn, and many other things of that sort which may serve to appease the hunger they are almost constantly suffering. Anything that is thrown to the hogs will be also accepted by a Californian, and he takes it without feeling offended, or thinking for a moment that he is treated below his dignity. For this reason no one took the trouble to clean the wheat or maize, which was cooked for them in a large kettle, of the black worms and little bugs, even if the numbers of these vermin had been equal to that of the grains. By a daily distribution of about 150 bushels of bran (which they are in the habit of eating without any preparation) I could have induced all my parishioners to remain permanently in the mission, excepting during the time when the pitahayas are gathered.

“I saw one day a blind man, 70 years of age, who was busily engaged in pounding between two stones an old shoe made of raw deerskin, and whenever he had detached a piece he transferred it promptly to his mouth and swallowed it; and yet this man had a daughter and grown grandchildren. As soon as any of the cattle are killed and the hide is spread out on the ground to dry, half a dozen boys or men will instantly rush upon it and commence to work with knives, flints, and their teeth, tearing and scratching off pieces, which they eat immediately, till the hide is full of holes or scattered in all directions. In the mission of St. Ignatius and in others further toward the north there are persons who will attach a piece of meat to a string and swallow it and pull it out again a dozen times in succession, for the sake of protracting the enjoyment of its taste.

“I must here ask permission of the kind reader to mention something of an exceedingly disgusting and almost inhuman nature, the like of which probably never has been recorded of any people in the world, but which demonstrates better than anything else the whole extent of the poverty, uncleanness, and voracity of these wretched beings. In describing the pitahayas I have already stated that they contain a great many small seeds resembling grains of powder. For some reason unknown to me these seeds are not consumed in the stomach, but pass off in an undigested state, and in order to save them the natives collect during the season of the pitahayas that which is discharged from the

feeble thrift-sense may be regarded as emerging. And the rise of thrift in Seriland, like esthetic and industrial beginnings generally, is shaped

human body, separate the seeds from it, and roast, grind, and eat them, making merry over their loathsome meals, which the Spaniards therefore call the second harvest of the Californians. [This statement is corroborated in all particulars by Clavigero in his *Storia della California*, Venice, 1789, vol. I, p. 117.] When I first heard that such a filthy habit existed among them I was disinclined to believe the report, but to my utter regret I became afterwards repeatedly a witness to the proceeding, which they are unwilling to abandon, like many other bad practices [probably because of the fiducial character of the custom—W J M.]. Yet I must say in their favor that they have always abstained from human flesh, contrary to the horrible usage of so many other American nations who can obtain their daily food much easier than these poor Californians.

“They have no other drink but the water, and heaven be praised that they are unacquainted with such strong beverages as are distilled in many American provinces from Indian corn, the aloë, and other plants, and which the Americans in those parts merely drink for the purpose of intoxicating themselves. When a Californian encounters during his wanderings a pond or pool, and feels a desire to quench his thirst, he lies flat on the ground and applies his mouth directly to the water. Sometimes the horns of cattle are used as drinking vessels.

“Having thus far given an account of the different articles used as aliment by the aborigines of the peninsula, I will now proceed to describe in what manner they prepare their victuals. They do not cook, boil, or roast like people in civilized countries, because they are neither acquainted with these methods nor possessed of vessels and utensils to employ for such purposes; and, besides, their patience would be taxed beyond endurance if they had to wait till a piece of meat is well cooked or thoroughly roasted. Their whole process simply consists in burning, singeing, or roasting in an open fire all such victuals as are not eaten in a raw state. Without any formalities, the piece of meat, the fish, bird, snake, field mouse, bat, or whatever it may be is thrown into the flames or on the glowing embers, and left there to smoke and to sweat for about a quarter of an hour; after which the article is withdrawn, in most cases only burned or charred on the outside, but still raw and bloody within. As soon as it has become sufficiently cool, they shake it a little in order to remove the adhering dust or sand, and eat it with great relish. Yet I must add here, that they do not previously take the trouble to skin the mice or disembowel the rats, nor deem it necessary to clean the half-emptied entrails and maws of larger animals, which they have to cut in pieces before they can roast them. Seeds, kernels, grasshoppers, green caterpillars, the white worms already mentioned, and similar things that would be lost, on account of their smallness, in the embers and flames of an open fire, are parched on hot coals, which they constantly throw up and shake in a turtle shell or a kind of frying pan woven out of a certain plant. What they have parched or roasted in this manner is ground to powder between two stones, and eaten in a dry state. Bones are treated in like manner.

“They eat everything unsalted, though they might obtain plenty of salt; but since they cannot dine every day on roast meat and constantly change their quarters, they would find it too cumbersome to carry always a supply of salt with them.

“The preparation of the aloë, also called *mescale* or *maguey* by the Spaniards, requires more time and labor. The roots, after being properly separated from the plants, are roasted for some hours in a strong fire, and then buried, twelve or twenty together, in the ground, and well covered with hot stones, hot ashes, and earth. In this state they have to remain for twelve or fourteen hours, and when dug out again they are of a fine yellow color, and perfectly tender, making a very palatable dish, which has served me frequently as food when I had nothing else to eat, or as dessert after dinner in lieu of fruit. But they act at first as a purgative on persons who are not accustomed to them, and leave the throat somewhat rough for a few hours afterwards.

“To light a fire the Californians make no use of steel and flint, but obtain it by the friction of two pieces of wood. One of them is cylindrical, and pointed on one end, which fits into a round cavity in the other, and by turning the cylindrical piece with great rapidity between their hands, like a twirling stick, they succeed in igniting the lower piece if they continue the process for a sufficient length of time.

“The Californians have no fixed time for any sort of business, and eat, consequently, whenever they have anything, or feel inclined to do so, which is nearly always the case. I never asked one of them whether he was hungry who failed to answer in the affirmative, even if his appearance indicated the contrary. A meal in the middle of the day is the least in use among them, because they all set out early in the morning for their foraging expeditions, and return only in the evening to the place from which they started, if they do not choose some other locality for their night quarters. The day being thus spent in running about and searching for food, they have no time left for preparing a dinner at noon. They start always empty-handed; for if perchance something remains from their evening repasts they certainly eat it during the night in waking moments or on the following morning before leaving. The Californians can endure hunger easier and much longer than other people; whereas they will eat enormously if a chance is given. I often tried to buy a piece of venison from them when the skin had but lately been stripped off the deer, but regularly received the answer that nothing was left; and I knew well enough that the hunter who killed the animal needed no assistance

by faith and attendant ceremony; for the doubly consumed food is credited with intensified powers and virtues, and held to be specially potent in the relief of hunger and in giving endurance for the hard warpath or prolonged chase; it is—and makes—very strong (“mucho fuerte”), in the laconic and confident explanation of Mashém. Incongruous as the custom is to higher culture, it finds natural suggestion in the everyday habits of the tribe, who are wonted not only to the eating of animal entrails in raw and uncleaned condition, but especially to the relief of the sharpest pangs of hunger by means of the soft structures and their semiassimilated contents—an association of much influence in primitive thought. Concordantly with the custom and the faith grown out of it, the excreta in general take a prominent place in the Seri mind; the use of urine in ablution, etc., is little understood and may be passed over; but all bony feces—and it may be noted that the “sign” of the Seri more resembles that of wolves or snake-eating swine than that of men—following gorges of large quarry are customarily located and kept in mind for recourse in time of ensuing shortage, when the mass is ground on the ahst and reconsumed; and even the ordinary discharge is preserved during the seasons of less reliable food-supply.

There is an obscure connection between this curious and repulsive food custom of the Seri and the mortuary customs of the tribe, which

to finish it. Twenty-four pounds of meat in twenty-four hours is not deemed an extraordinary ration for a single person, and to see anything eatable before him is a temptation for a Californian which he cannot resist; and not to make away with it before night would be a victory he is very seldom capable of gaining over himself.”

Clavigero's account of the food-habits of the California Indians is similar, though generally less explicit. According to him the seeds forming the “second harvest of pitahayas” are extracted carefully while fresh, and are afterward roasted, ground, and preserved in the form of meal against the ensuing winter. Of the reswallowing habit, he says:

“The savages living in the northern part of the peninsula have found the secret, unknown to mortals in general, to eat and re-eat the same meal repeatedly. They tie a string around a mouthful of meat dried and hardened in the sun. After chewing it for a while they swallow it, leaving the string hanging from the mouth. After two or three minutes, by means of the string they draw the meat up again to be rechewed, and this they repeat as many times as may be necessary until the morsel is consumed or so softened that the string will not hold it any longer. In extracting it from the throat they make such a noise that to one who has not before heard it it appears that they are choking themselves.

“When many individuals are gathered together to eat in this manner it is practiced with more ceremony. They seat themselves on the ground, forming a circle of eight or ten persons. One of them takes the mouthful and swallows it, and afterwards draws it up again and passes it to the next one, and this one to another, proceeding thus around the circle with much enjoyment until the morsel is consumed. This has astonished the Spaniards who have seen it, and indeed it would not be credible if it had not been unanimously testified to by all who have been in that country. Several Jesuits who did not believe this, notwithstanding that sincere and prominent persons confirmed it, having afterwards gone to California saw it with their own eyes. Among those Indians who have embraced Christianity this loathsome and dangerous method of eating has been abandoned in consequence of the continual reproofs of the missionaries.” (*Historia de la Antigua ó Baja California, obra postuma del Padre Francisco Javier Clavigero; Mexico, 1852, p. 24.*)

The records of Clavigero and Baegert indicate fair correspondence in the food habits of the California Indians and the Seri, though there are certain noteworthy differences, e. g., the tabu of the badger among the former and of the ground-squirrel among the latter; it would also appear that the Californians were the more largely vegetarian and the better advanced in culinary processes. The customs of the Seri throw light on the genesis of “re-eating”, for the process would appear to be but an extension of the repeated mouthing and swallowing of tendonous strings still attached to the bones of larger animals.

was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Arca* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

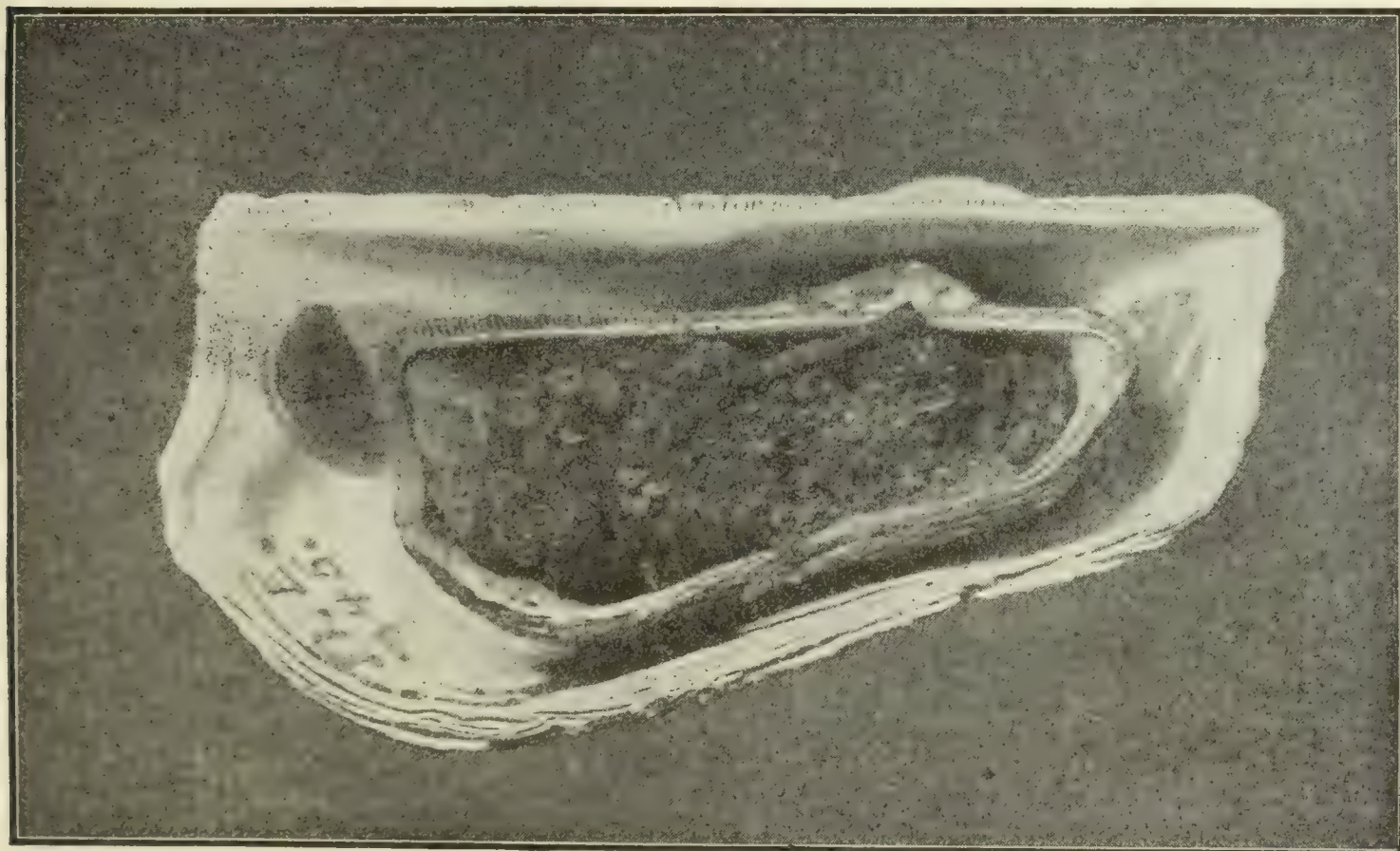


FIG. 25—Scatophagic supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.¹

In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.75 pounds (about 1,250 grams) daily, or 1,000

¹ Cf. *Scatologic Rites of all Nations*, by Captain John G. Bourke, 1891, especially chapter LI, pp. 459-460. The Seri custom, resting, as it does, on an evident economic basis, tends to explain the scatophagy of the Hopi and other tribes described by Bourke.

pounds (about 455 kilograms) yearly. The aggregate diet of the tribe may be estimated also by assuming the population to comprise 300 full eaters, besides, say, 50 nurslings negligible in the computation; so that the annual consumption of the tribe may be reckoned at 300,000 pounds (136,000 kilograms), or 150 tons, of solid food. Accordingly the several constituents may be estimated, as shown in the accompanying table, in percentages of the total, in pounds aggregate and apiece for the eaters, and (so far as practicable) in units both aggregate and apiece; the weights of units being roughly averaged at 100 pounds (45 kilograms) for turtles, 12½ pounds (5.6 kilograms) for large land game, 450 pounds (about 200 kilograms) for stock, and 2 ounces (56.7 grams) for tunas.

Estimated annual dietary of the Seri tribe

Constituents	Per cent	Quantity		Units	
		Aggregate	Apiece	Aggregate	Apiece
		<i>Pounds</i>	<i>Pounds</i>		
Turtles	25	75, 000	250	750	2½
Pelicans	5	15, 000	50	1, 200	4
Other water-fowl and eggs	8	24, 000	80	.....	.....
Fish	15	45, 000	150	.....	.....
Shellfish (except turtles)	10	30, 000	100	.....	.....
Large land game	7	21, 000	70	200	¾
Other land game	8	24, 000	80	.....	.....
Stock	6	18, 000	60	40	⅓
Tunas	9	27, 000	90	216, 000	720
Other vegetals	5	15, 000	50	.....	.....
Miscellaneous	2	6, 000	20	.....	.....
Total	100	300, 000	1, 000	.....	.....

Of course the constituents vary with temporary conditions; during “The Time of the Big Fish”, practically all other sources of food were neglected until the providential supply was exhausted; during the decades of main subsistence on stolen stock it is probable that the consumption of other constituents, perhaps excepting the tunas, was proportionately reduced; and it is not improbable that during the warfare between Seri and Tepoka, described by Hardy, the consumption of turtles was materially diminished. Judging from the direct and indirect data and from general analogies, the least variable constituent is the cactus fruit, which probably fails but rarely and is so easily harvested as practically to supplant all other supplies during its season of a month or more. At the best, too, the quantitative estimates are nothing more than necessarily arbitrary approximations, based on incomplete inquiries and observations;¹ yet they are better than no estimates at all, and

¹ About 200 turtle-shells were noticed about the rancherias at Punta Tormenta and Rada Ballena alone in 1895, all being less than two years old, as judged from the degree of weathering.

appear to form a fairly trustworthy basis for consideration of the Seri food habits.

On reviewing the constituents it would appear that the Seri must be regarded as essentially a maritime people, in that about two-thirds of their food is derived from the sea; also that they must be deemed essentially carnivorous, since fully five-sixths of their diet (84 per cent plus a share of the miscellaneous—chiefly scatophagous—category) is animal. The tabulation does not show the relative proportions of the several constituents cooked and eaten raw, but the best available data indicate that fully three-fourths of the ordinary dietary, both animal and vegetal, is ingested in raw condition, and that the greater part of the remaining fourth is imperfectly cooked.

In recapitulating the devices for food-getting, it is found that nearly all of the more distinctive artifacts and crafts are either directly or indirectly connected with that primary activity of living things, food-conquest. Foremost among the distinctive artifacts of the Seri, in its relation to daily life and in its technical perfection, is the canteen-olla; probably second in importance, and also in technical perfection, is the balsa—whose functions, however, extend beyond simple food-getting; next comes the crude and simple, yet economically perfected, turtle-harpoon, with its variants in the form of arrow (with a function in warfare as well as in food-getting) and fire-drill; while the light basket-tray, although capable of carrying ten to twenty-five times its own weight, is perhaps the least perfect technically of the artifacts directly connected with sustentation. And it should be noted that the prevailing tools—hupf, ahst, multifunctional shell, and awl of mandible or bone or tooth—have either an immediate or a secondary connection with food-getting.

NAVIGATION

At first sight Seriland seems an abnormal habitat for a primitive people, since its land area is cleft in twain by a stormy strait—a strait whose terrors to the few Caucasian navigators who have reached its swirling currents are indicated by their appellations, “El Canal Peligroso de San Miguel”¹ and “El Infiernillo”; for such a stretch of troubled water is commonly a more serious bar to travel than any moderate land expanse. This intuitive notion of the effectiveness of a water barrier, and the correlative feeling of the incongruity of a land barrier insuperable for centuries, is well illustrated by prevailing opinion throughout northwestern Mexico; for it is commonly supposed in Sonora and neighboring states that Seriland is conterminous with Isla Tiburon, i. e., that the mainland portion of the province (including Sierra Seri with its flanking footslopes) lies beyond the diabolic channel. Yet longer scrutiny shows that the superficial impression merely mirrors Caucasian thought and fails to touch the essential conditions,

¹ Hardy, *Travels*, p. 291.

especially as they are reflected in the primitive minds of the local tribe; and careful study of the habits and history of the Seri shows that the dangerous strait has been a potent factor in preserving tribal existence and perpetuating tribal integrity. Naturally the factor operates through navigation; for it is by means of this art that the tribesmen are able to avoid or to repel the rare invaders of either mainland or insular portions of their province, the overland pioneers from the east being stopped by the strait and the maritime explorers from south and west being unable to maintain themselves long about the stormy shores and never outfitted for pushing far toward the mainland retreats and strongholds; while by means of their light and simple craft the Seri were able to retreat or to advance across the strait as readily as over the adjacent lands to which they were wonted by the experience of generations. In their minds, indeed, El Infiernillo is the nucleus of their province. So the Seri were among the lowliest learners of that lesson of highest statecraft, that lands are not divided but united by intervening sea; and their ill-formulated and provincial notions are of much significance in their bearing on autochthonous habits and habitats.

The water-craft of which the Seri make so good use is a balsa, made of three bundles of carrizal or cane lashed together alongside, measuring barely 4 feet abeam, $1\frac{1}{2}$ feet in depth, and some 30 feet in length over all. A fine specimen (except for a slight injury at one end) is shown in plan and profile in plate XXXI. It was obtained near Boca Infierno in 1895, partly towed and partly paddled thence to Embarcadero Andrade, wagoned laboriously across Desierto Encinas and on to Hermosillo, conveyed in an iron-sheathed box on two gondolas of the narrow-gage Ferrocarril de Sonora to the international frontier, and finally freighted to the United States National Museum, where (in the Mall just outside the building) the photographs reproduced in the plate were taken.

The manufacture of the balsa has never been seen by Caucasian eyes, but the processes are safely inferred from the structure, whose testimony is corroborated in part by Mashém's imperfect descriptions. The first step is the gathering of the carrizal from one of the patches growing about the three or four permanent fresh waters of Seriland, the canes being carefully selected for straightness, symmetry, and uniformity in size; these are then denuded of leaves and tassels, tied in bundles of convenient size (one seen on Tiburon contained 40 or 50 canes), and carried to the shore. In actual construction the canes are laid butt to butt, but overlapping 2 or 3 feet, the overlap being shifted this way and that with successive additions, so that the aggregate length of overlapping in the bundle reaches 10 or 12 feet—i. e., the full length of the body of the finished craft. The growing bundle is wrapped from time to time with lashings of mesquite root or maguey fiber, and kept in cylindrical form by constant rolling and by means of the lashing; though the cord used for the purpose is so slender as to do little more than serve the purposes



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SERI BALSA IN THE NATIONAL MUSEUM

of manufacture (only stray shreds of the interior cording could be found in an old and abandoned balsa on Punta Antigualla). As the bundle approaches the requisite size, the building process changes; the butts of the successively added stalks are thrust obliquely into the interstices extending beyond the butts of earlier-used canes, and the stems are slightly bent to bring them into parallelism with their fellows; and this interweaving process is continued with increasing care until, when the bundle is completed, there are no visible butts (all being pushed into the interior of the bundle), while the only visible tips are those projecting to form the tapering extremities. The finished bundle is then secured by a spiral winding of slender cord. Two other bundles are next made, the three being entirely similar, so far as is known; then the three are joined by a lashing of slender cord like that used for the separate bundles, which is twined alternately above and below the central bundle in such manner as to hold the three in an approximate plane save toward the extremities, where the lashing is much firmer and the tapering tips of the bundles are brought into a triangular position, i. e., the position of smallest compass. The cordage is of either mesquite root or maguey fiber, the former being the more common, so far as observed (doubtless by reason of the dearth of the latter plant); it is notably uniform in twist and size, though surprisingly slender for the purpose, barely three-sixteenths of an inch, or 5 mm., in diameter, and limited in quantity.¹ The only tools or implements used in the manufacture (and repair), so far as is known, are light wooden marlinspikes, two of which are illustrated in figure 26; these are used in working the cane-butts into the bundles. In collecting the canes the tassels are broken off and the leaves stripped by the unaided hands, while the stalks are broken off usually below the secondary roots in the downward taper, and the rootlets and loose ends are removed either with the hands or by fire.

The finished balsa is notably light and buoyant. The Boca Inferno specimen was estimated to weigh about 250 pounds (113 kilograms) when thoroughly dry, and little more than 300 pounds (126 kilograms)

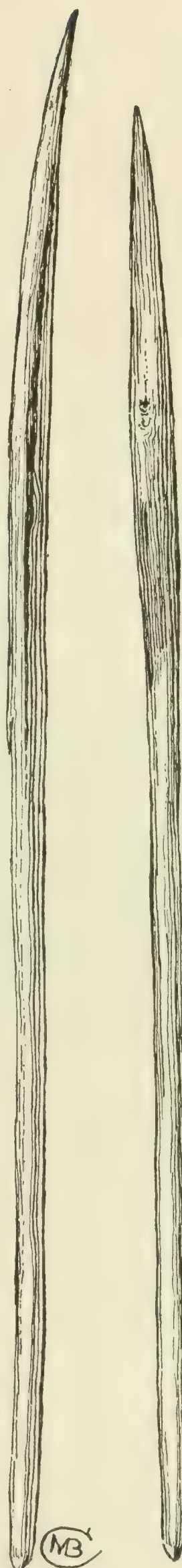


FIG. 26—Seri marlin-spikes.

¹Only the finer cording shown in plate XXXI is original, the coarser ropes having been added to facilitate handling.

when completely wet; so that it could easily be picked up by three or four, or even by two, strong men and carried ashore to be hidden in the fog-shrubbery skirting the coast. The craft floated high with one man aboard, rode better with two, carried three without much difficulty even in a fairly heavy sea, and would safely bear four adults aggregating 600 pounds (272 kilograms) in moderate water. The most striking features of the craft afloat are its graceful movement and its perfect adaptation to variable seas and loads. The lines are symmetric and of great delicacy, as indicated even by the photographs out of its element; the reed-bundles are yielding, partly by resilience and partly in the way of set, so that the body of the craft curves to fit the weight and distribution of the load and to meet the impact of swells and breakers. In smooth water a lightly laden balsa may appear heavy and logy, but with a heavier load and stronger sea each tapering end rises strongly and then recurves slightly in a Hogarthian line graceful as the neck of a swan, while the whole craft skims the waves or glides sinuously over their



FIG. 27—The balsa afloat.

crests in a lightsome way, recalling the easy movement of gull or petrel. A suggestion of its effect is shown in figure 27, a composite drawn largely from photographs; another suggestion is shown in figure 28, reproduced in facsimile from a drawing by the artist of the U. S. S. *Narragansett* in 1873,¹ the only known picture of the craft antecedent to the 1895 expedition.

Almost equally striking features of the balsa are its efficiency and safety under the severe local conditions. Carrying twice its weight of (chiefly) living freight, it breasts gales and rides breakers and stems tiderips that would crush a canoe, swamp a skiff, or capsize a yawl; while if caught in currents or surf and cast ashore it is seldom wrecked, but drops lightly on beach or rocks, to be pushed uninjured by the broken wave-tips beyond the reach of pounding rollers, even if it is not at once caught up by its passengers and carried to complete safety. The strength of the craft is amazing, especially in view of the slender-

¹ Publication No. 56, U. S. Hydrographic Office, Bureau of Navigation, 1880, plate xv, p. 136.

ness of the cords used in construction; in fact, the outer layers of canes are so ingeniously interlocked by the insertion of their butts into interstices that each bundle holds itself together with slight aid from the exterior cording, while even the bundles themselves are held in proper relative position by the secure terminal tying rather than by the intertwined cording of the body of the craft. And the entire construction exemplifies the compartment principle to perfection; a slight injury may affect but a single joint of one out of several thousand canes, while even a severe fall on sharp rocks seldom injures more than a few score canes, and these in a few joints only. The most objectionable feature of the balsa lies in the fact that it affords little protection from the wet. The water rises freely through the reed bundles to a height depending on the load, and not only the spray but the whitecaps and combers as well dash freely over the unprotected body of the craft; but this defect is of little consequence to the hardy and nearly nude navigators, or to their scanty and practically uninjurable freight.

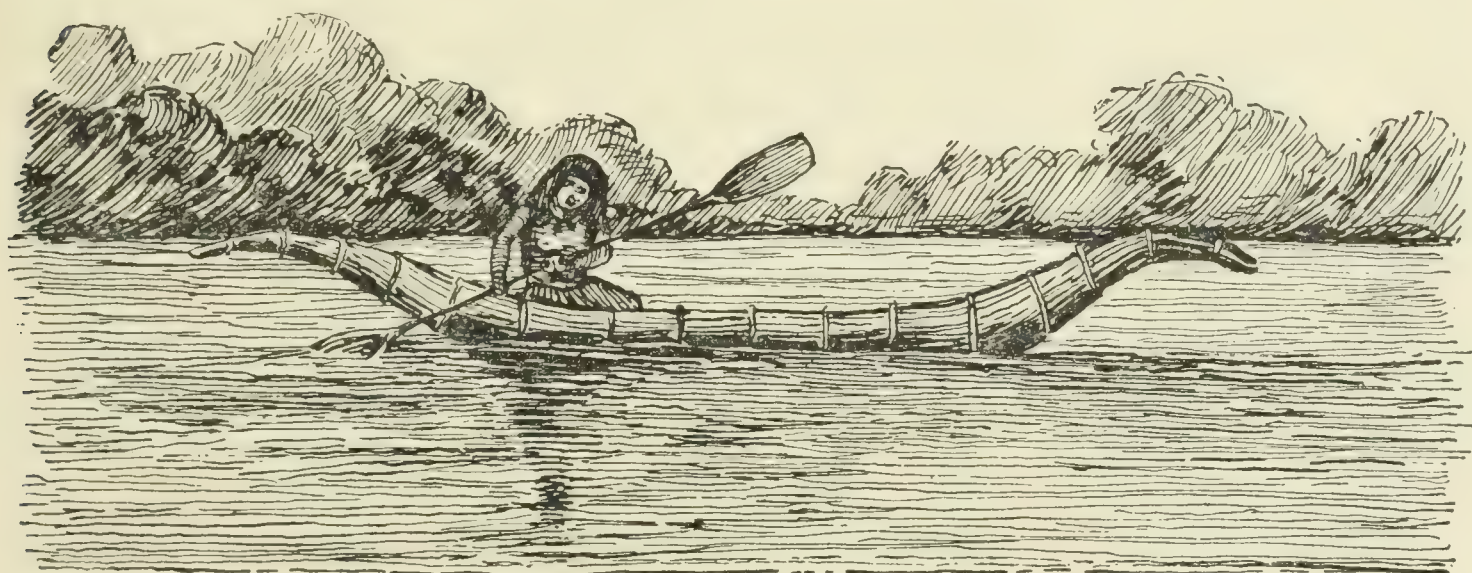


FIG. 28—Seri balsa as seen by *Narragansett* party.

The gracefulness and efficiency of the balsa itself stand in strong contrast with the crude methods of propulsion. According to Mashém, the craft is commonly propelled by either one or two women lying prone on the reeds and paddling either with bare hands or with large shells held in the hands; according to Hardy, the harpoon main shaft is used by turtle fishermen for paddling (and probably for poling, also); according to the Dewey picture (figure 28), the vessel is driven by a woman with a double-end paddle like that used in connection with the conventional canoe; while the expedition of 1895 found on Isla Tiburon four or five paddles rudely wrought from flotsam boards and barrel-staves, and partly hafted with rough sticks 3 or 4 feet long, but partly without handles and evidently designed to be grasped directly, like the shells of Mashém's descriptions. No trace of oars, rowlocks, sculls, rudders, or masts were found, and there is nothing to indicate the faintest notion of sails and sailing. On the whole there is no trace of well differentiated propelling devices—i. e., the craft is perfected only as a static device and not at all as a dynamic mechanism.

Despite their poverty in propelling devices, the Seri navigate their waters successfully and extensively. Perhaps the commonest function of the craft is that exercised in connection with the turtle fishery, though its chief office as a factor of general industrial economy is that of bridging El Infiernillo at the will of the roving clans. It is by means of this craft, also, that the semiceremonial pelican feasts on Tiburon are consummated; it is by the same means that Isla Patos, Isla Turner, Roca Foca, and other insulated sources of food-supply are habitually reached; and both Mashém's accounts and the Jesuits' records indicate that occasional voyages are pushed to San Esteban, San Lorenzo, Angel de la Guarda, and even to the Baja California coast.

Concordantly with the tribal customs, little freight is carried. The traveling family transport their poor possessions to the shore, bring out the balsa from its hiding place in the thick and thorny fog-shrubbery, launch it, lade it with a filled olla and the weapons of a man and implements of a woman, besides any chance food and clothing, and embark lightly to enjoy the semirepose of drifting before the breeze—until the rising gale brings labor still more arduous than that of scouring the spall-strewn slopes or sandy stretches of their hard motherland. Commonly the terminus of the trip is fixed largely by the chance of wind and tide; and when it is reached the party carry the craft inshore, conceal it shrewdly, and then take up their birdskin bed and walk forth in search of fresh water and meat. The successful fishing trips of course end in orgies of gorging, and when the voyage is the climax of a foray to the mainland frontier for stock-stealing, the quarters and paunches and heads hastily thrown aboard at the mainland side of the strait are carried to the rancherias for consumption at leisure; and this has happened so often that equine hoofs and bovine bones are common constituents of the middens on Tiburon.

Although measurably similar to Central American and South American types of water-craft, the Seri balsa is a notably distinct type for its region. The California natives, as well as those of the mainland of Mexico south of Rio Yaqui, used rafts made either of palm trunks or of other logs lashed alongside rather than balsas; while the far-traveling tribes used either sails or well-differentiated paddles for propulsion.

Briefly, the Seri balsa is remarkable for perfect adaptation to those needs of its makers shaped by their distinctive environment. It seems to approach the ideal of industrial economy—the acme of practicality—in the adjustment of materials and forces to the ends of a lowly culture; and, like the olla and harpoon and arrow, it affords an impressive example of the adjustment of artifacts to environment through the intervention of budding intelligence. Yet the chief significance of the craft would seem to reside in its vestigial character as a survival of that orarian stage in the course of human development

in which men lived alongshore and adjusted themselves to maritime conditions rather than to terrestrial environments; a stage evidently but barely passed by the Seri, since they still subsist mainly on sea food, still retain their suggestive navigation, and still view their stormy straits and bays as the nucleus and noblest portion of their province.

HABITATIONS

Among the Seri, as among primitive folk generally, the habitation reflects local conditions, especially climate and building materials. Now, Seriland is a subtropical yet arid tract, where rain rarely falls, frost seldom forms, and snow is known only as a fleeting mantle on generally distant mountains, so that there is little need for protection from cold and wet; at the same time the district is too desert to yield serviceable building material other than rock, which the lowly folk have not learned to manipulate. Moreover, the tribesmen and their families are perpetual fugitives (their movements being too erratic and aimless to put them in the class of nomads); they are too accustomed to wandering and too unaccustomed to long resting at particular spots to have a home-sense, save for their motherland as a whole; and, just as they rely on their own physical hardihood for preservation against the elements, so they depend on their combined fleetness and prowess for preservation against enemies. Accordingly, the Seri habitation is not a permanent abode, still less a domicile for weaklings or a shrine for household lares and penates, not at all a castle of proprietary sanctity, and least of all a home; it is rather a time-serving lair than a house in ordinary meaning.

Despite the poverty of the material and the squalor of the structure, certain features of the Seri jacal are notably uniform and conventional. In size and form it recalls the passing "prairie schooner", or covered wagon; it is some 10 or 12 feet long, half as wide measured on the ground, and about $4\frac{1}{2}$ feet high, with one end (the front) open to the full width and height, and the other nearly or quite closed. The conventional structural features comprise the upright bows and horizontal tie-sticks forming the framework. The bows are made of okatilla stems (*Fouquieria splendens*) roughly denuded of their thorns; each is formed by thrusting the butts of two such stems (or more if they are slender) into the ground at the requisite distance apart, bending the tops together into an overlap of a yard or two, and securing them partly by intertwisting, partly by any convenient lashing; and about five or six such bows suffice for a jacal (the appearance of the bows is fairly represented by the ruin shown in plate VII). Next come the tie-sticks, which consist of any convenient material (okatilla stems, cane-stalks, paloblanco branches, mesquite roots, saguaro ribs, etc.), and are lashed to the butts by means of withes, splints, or fiber wisps, at a height of some 4 feet above the ground, or about where the walls merge into the roof. With the placing of these sticks the conventional part

of the building process may be said to end; for up to this point the process is a collective one and the materials are essentially uniform, while thereafter the completion of the work depends largely on individual or family caprice, and the materials are selected at random. Moreover, the framework is fairly permanent, usually surviving a number of occupancies extending over months or years, and outlasting an equal number of outer coverings; so that all habitable Seriland is dotted sparsely with jacal skeletons, sometimes retaining fragments of walls or roof, but oftener entirely denuded.

The conversion of the framework into a habitable jacal is effected by piling around and over it any convenient shrubbery, by which it is made a sort of bower; sometimes the conversion is aided by the attachment of additional tie-sticks both above and below the main horizontal pieces, as illustrated in the upper figure of plate IX; sometimes, too, the material of walls and roof is carefully selected and interwoven with such pains as to form a rude thatch, as in the chief jacal at Rada Ballena (the upper figure in plate VI); but more commonly the covering is collected at random and is laid so loosely that it is held in place only by gravity and wind pressure, and may be dislodged by a change of wind. Ordinarily the walls are thicker and denser than the roofs, which are supplemented in time of occupancy by haunches of venison, remnantal quarters of cattle and horses, half-eaten turtles, hides and pelts, as well as bird-skin robes, thrown on the bows partly to keep them out of reach of coyotes and partly to afford shade. Most of the jacales about the old rancheria at Punta Tormenta (abandoned at "The Time of the Big Fish"), which may be regarded as the center of the turtle industry, are irregularly clap-boarded with turtle-shells and with sheets of a local sponge, as illustrated in plate VII. This sponge abounds in the bight of Rada Ballena, where at high water it spreads over the silty bottom in a slimy sheet, and at low water with off-shore gales is left by the waters to dry into a light and fairly tenacious mat, which is gathered in sheets for bedding as well as for house making material (a specimen of the sponge—probably *Chalina*—is shown on larger scale in plate VIII). On the frontier the jacales may be modified by the introduction of sawed or riven lumber, as illustrated by some of the structures at Costa Rica (shown in plate XI); but even here there is a strong disposition to adhere to the customary form, and especially to the conventional framework, as indicated by the example in plate X.

While the jacales are not consistently oriented, they reveal a primary preference for facing away from the prevailing wind and toward the nearest sea, with a secondary preference for southern and eastern exposures—the former preference being easily explained, since a gale from the front quickly strips walls and roof and scatters the materials afar. No definite order is observed in the placement of the several jacales in the larger rancherias; apparently the first is located at the choice of the leading elderwoman, and the others are clustered about it at the com-



PAINTED OLLA, WITH OLLA RING

mon convenience. Usually the several jacales are entirely separate; but at Punta Tormenta, Punta Narragansett, and still more notably at Rada Ballena, individual huts were found either extended to double length or joined obliquely in such wise as to show two fronts (as illustrated in plate VI). The conventional frameworks appear to be common tribal property, at least to the extent that an abandoned skeleton may be preempted by any comer; while the addition of walls and roof appears to afford a prescriptive proprietary right to the elderwoman and family by whom the work is done—though the right seems to hold only during occupancy, or until the temporary covering is dislodged.

The jacales are without semblance of furnishing, beyond an occasional ahst and a few loose pebbles used as hupfs; though the nooks behind the bows and tie-sticks sometimes serve as places of concealment for paint-cups, awls, hair bobbins, and other domestic trifles. There is no floor but earth, and this remains in natural condition, except for trampling and wearing into wallows, recalling those of fowls and swine, which afford a rough measure of the periods of occupancy; there is no fireplace—indeed, fires are rarely made in the jacales, nor for that matter frequently anywhere; and there are no fixed places for bedding, water ollas, or other portable possessions, none of which are left behind when the householders are abroad.

Little is known of the actual process of jacal building, especially in Seriland proper; but the observations of Señor Encinas and his vaqueros on the frontier corroborate Mashém's statements that the houses are built by (and belong to) the matrons; that several women customarily cooperate in the collection of the okatilla and erection of the framework; that the only tools used in the processes are hupfs and miscellaneous sticks; and that the placing and fitting of the beams and tie-sticks are accompanied by a chant, usually led by the eldest matron of the group. The same informants support the ready inference from the structure that the shrubbery and other material forming walls and roofs are gathered and placed from time to time by the women occupying the jacales.

The Seri building chant is suggestive. Neither Señor Encinas nor Mashém regarded it as religious or even ritualistic, but merely as a work-song designed (in the naive notion of the latter) to make the task lighter; and it seems probable that the local interpretation is correct. If so, the simple chant at once offers rational explanation for its own existence, and opens the way to explanation of the elaborate building rituals of more advanced tribes. The work-song is a common device in many lowly activities, ranging from those of children at play to those of sailors at the windlass, and undoubtedly serves a useful purpose in guiding, coordinating, and concentrating effort; to some extent the vocal accompaniment to the manual or bodily action apparently expresses that normal interrelation of functions manifested by second-

ary sense-effects (as when the sense of smell is intensified by exercise of the organs of taste), or, in another direction, by the habit of the youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the Word*, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummary and culminating “presto” of modern jugglery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.¹

APPARELING

Slightly as they have been affected by three centuries of sporadic contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; acculturally it is usually a rectangle of manta (coarse sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the accultural cloth kilt worn by men and larger boys are illustrated in plates XVI

¹The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on a shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving capa to confuse quarry or enemy after the manner of the toreador's cloak.

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment.

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,¹ or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use.

¹ Hardy (Travels, p. 298) describes the ceremonial wearing of the heads of deer with horns attached.

Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

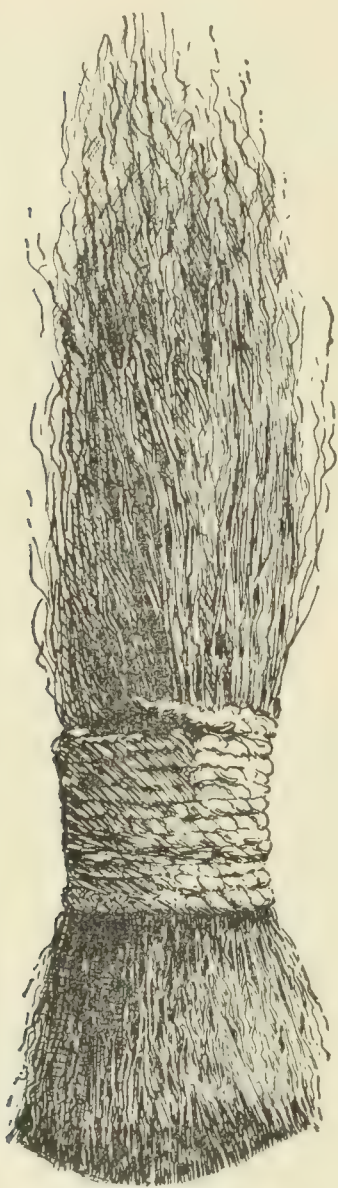


FIG. 29—Seri hairbrush.

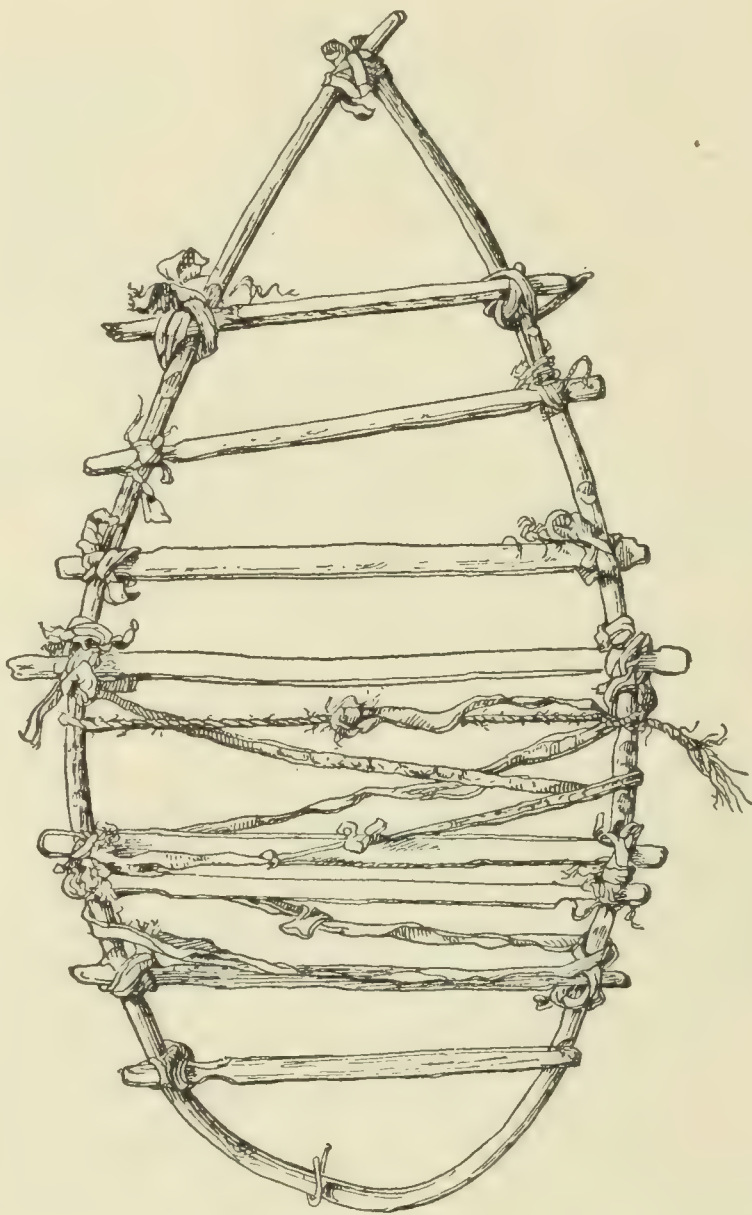


FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

In addition to the individual apparel, each clan, or at least the elder-woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,



PLAIN OLLA

apparently dried without dressing, together with skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

Aside from the painting paraphernalia, there is but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.¹

The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated



FIG. 31—Hair spindle.

¹Cf. Hardy, *Travels*, p. 290.

in figure 31. When the accumulation suffices the strands are doubled or quadrupled, as shown in figures 32 and 33, and the cords are either

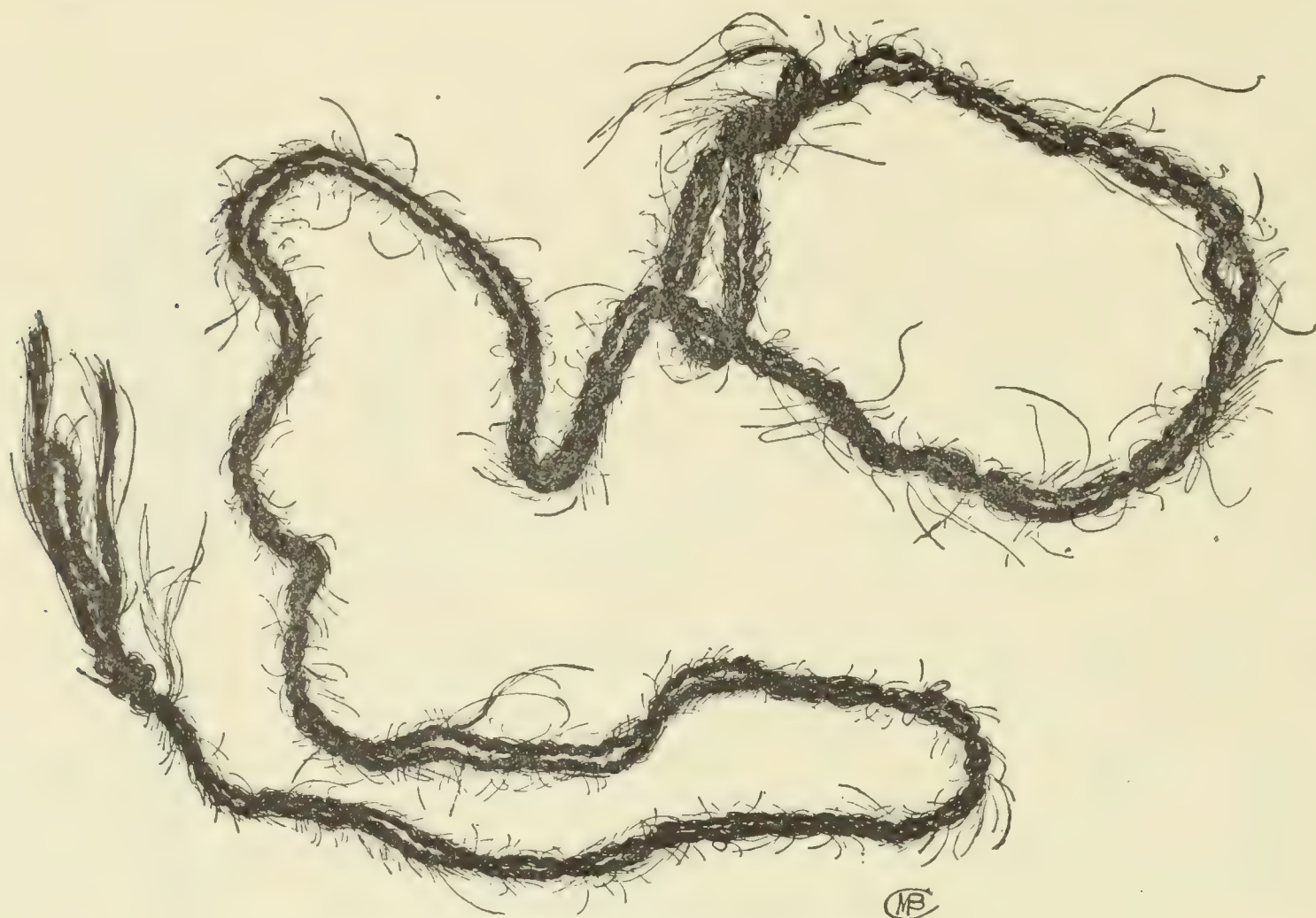


FIG. 32—Human-hair cord.

applied to immediate use or added to the matron's meager store against emergency demands. The cordage used for other purposes than apparel-

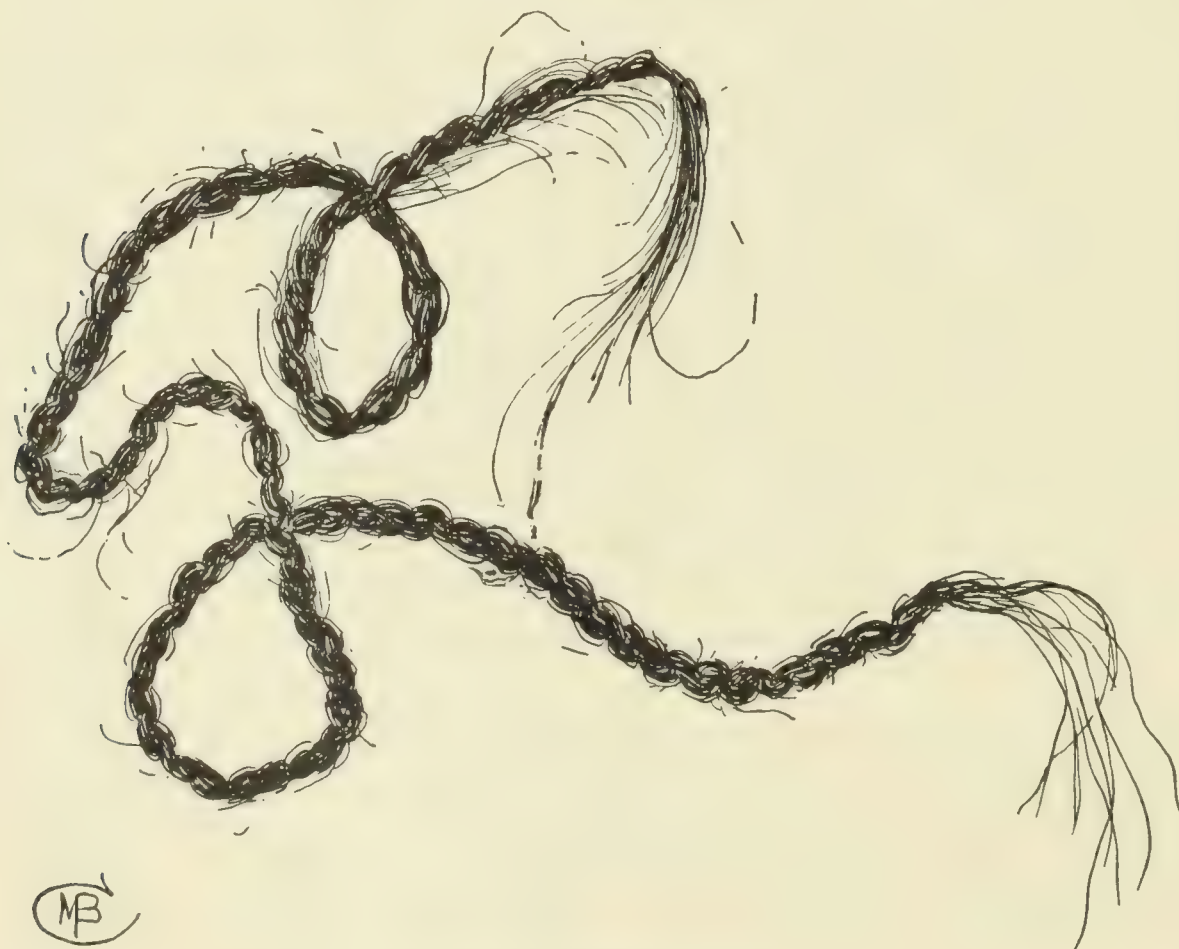


FIG. 33—Horsehair cord.

ing is commonly made from fiber extracted either from the roots of the mesquite or the stipes of the agave; usually it is well twisted and notably

uniform in size and texture; an inferior example appears in figure 34. The manes and tails of horses and other stock are also converted into cordage, of which the chief known application is in toy riatas. It is of no small significance that the most highly prized cordage material is human hair, and that its chief uses are connected with the person; that the next in order of diminishing preciousness is that derived from the fibrous plants, which is used in balsa-making, bowstrings, harpoon cords, etc, as well as in the native fabrics; and that the least prized material is that derived from imported animals, which is largely limited in its utilization to youthful imitation of Caucasian industries; for the association of material with function reflects a distinctive feature of

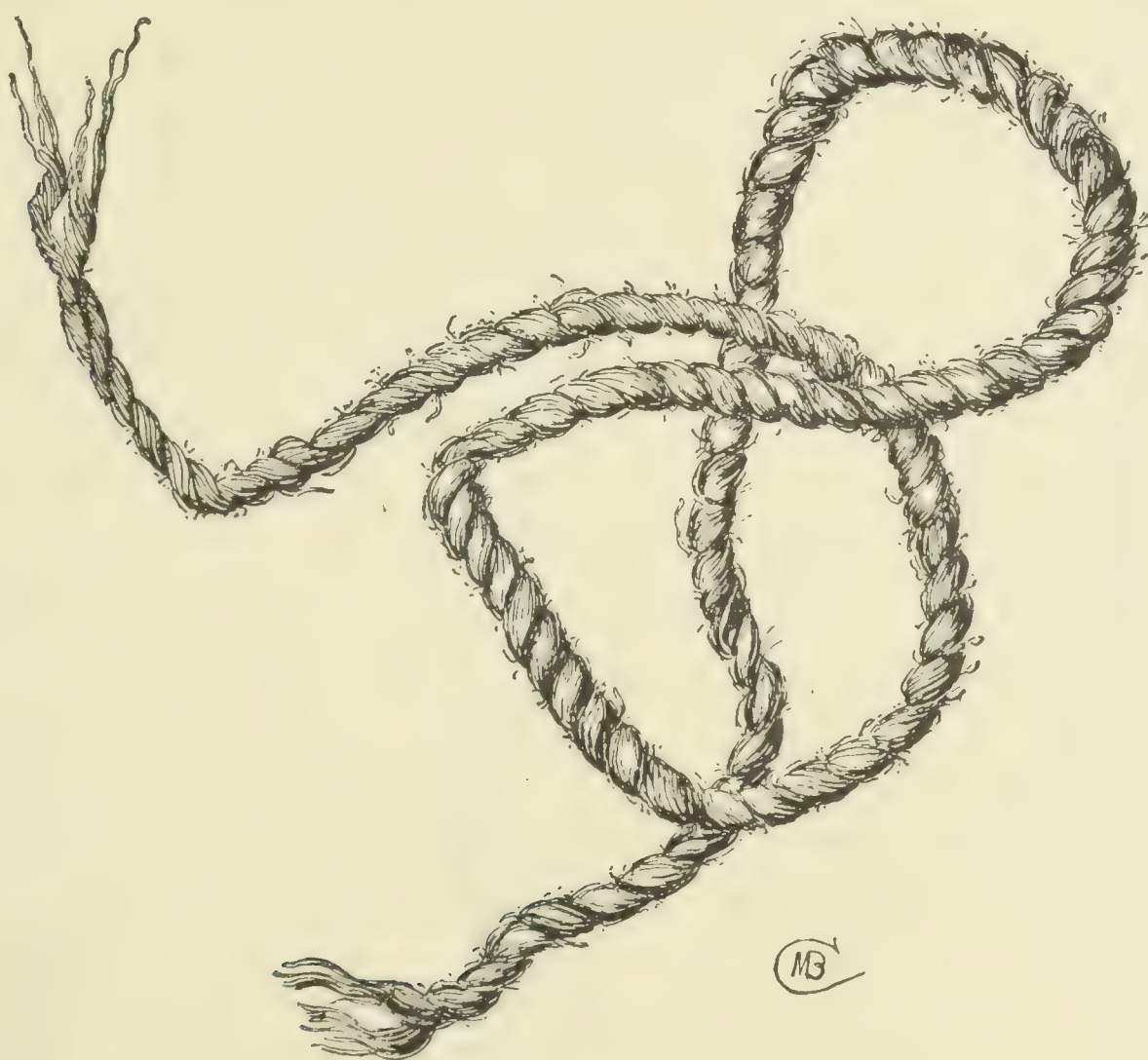


FIG. 34—Mesquite-fiber rope.

primitive thought, akin to that displayed in somewhat higher culture as synecdochic magic, the doctrine of signatures, etc.

Partly because of that decadence of aboriginal devices correlated with acculturation, partly by reason of imperfect observation, practically nothing is known of Seri spinning and weaving, and little of Seri sewing. The religiously-guarded hair-combings are twisted in the fingers and wound on stick-bobbins without aid of mechanical appliances; and, so far as has been observed, the final making of hair cords is merely a continuation of the strictly manual process. The agave stipes and mesquite roots are alleged by vaqueros to be retted in convenient lagoons and barrancas (a statement corroborated by the finding of half a dozen sections of mesquite root soaking in a lagoon near Punta Anti-

gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are

patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.¹ Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material

is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish



FIG. 35—Bone awl.



a



b

FIG. 36—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

¹ A rope-twisting device of the sort commonly employed by southwestern Indians was found in use by Seri boys at Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used, like the horse-hair riatas made by its aid, only in youthful sports.

Summarily, the customary apparel of Seri men and women may be regarded as limited to three articles—(1) a kilt, normally of coarse textile fabric, which is made a prime necessity by a well-developed pudency; (2) a short wammus, also normally of coarse textile fabric, which is apparently regarded as a convenience and luxury rather than a necessity; and (3) a robe, normally of pelican skin, sometimes substituted for either or both of the other articles, but ordinarily used as bedding or as a buckler. The most valued of these articles is the robe, which in the absence of the others replaces the kilt; yet pudency demands the habitual use of some form of kilt, while both wammus and robe are held so far superfluous that they may be laid aside or bartered or otherwise dispensed with whenever occasion arises.

On considering the special functions and probable genesis of the Seri appareling, the student is impressed by the absence of the breech-clout, except perhaps in temporary improvisations—though the absence of this widespread article of primitive costumery need awaken little surprise in view of the environment, and especially of the abounding barbs of Seriland, which render all appareling of doubtful value save for the protection of tissues softened by habitual covering. The prevailing thorniness of the habitat renders the free-flowing and easily removable apron the most serviceable protection for the exposed vitals of the pubic region; and this device, a common one in thorny habitats generally, grades naturally into the short skirt or kilt; while it would well accord with the maritime habit and habitual thought of the Seri to apply the tough and densely feathered skin of the pelican to the purpose. This suggestion as to the nascent covering of the tribe consists with the tribal faith, in which the Ancient of Pelicans ranks as the creative deity, while its modern representative is esteemed a protective tutelary possessing talismanic powers against cold, wet, bestial claw and fang, alien arrows, and all other evils; so that the use of this feathered pelt as a shield against spiny shrubbery, sharp-leaved sedges, and barb-thorned cacti is quite in harmony with Seri philosophy. Accordingly it seems clear that the pelican-skin kilt was autochthonous among the Seri, and that it was the original form of tribal appareling; and it is of no small significance that the type persists in actual use as well as in suggestive vestigial forms, such as pelican-down swaddling for infants, pelican-feather plumes on cradle nets, etc.

The passage from the pelican-skin kilt to the garment of textile fabric under the slow processes of primitive thought may not be traced confidently, though a strong suggestion arises in the Seri hair-cult (a Samsonian faith not without parallel in far higher culture) under which mystical powers and talismanic virtues are imputed to the human pelage. It is in connection with this cult that the Seri locks are so attentively cultivated and so assiduously preserved and consecrated to more intimate personal uses in belts, necklaces, and the like; and although the connecting links have not been found, it is thoroughly

in accord with Seri thought to assume that in earlier times the hair necklaces were expanded into rudimentary apparel in connection with pelican-skin shields, and after the conquest of vegetal fibers into more finished garments probably woven partly of hair and worn in such wise as to supplement the natural pelage in the protection of back, shoulders, chest, and arms. If the indication of the tribal cult be valid, it would appear that the wammus was the second piece of apparel in order of genesis, though the first to be made of artificial fabric; and it is noteworthy that the suggestion is supported by the form of the short and free-flowing garment underlying the flowing tresses of warriors and matrons, as well as the vestigial use of human-hair cords for neckbands and fastening strings; while its antiquity in comparison with the textile kilt is indicated by the fact that it is a finished artifact, evidently fitted to its functions by generations of adjustment.

The step from the making of the wammus to the substitution of artificial fabrics for the pelican-skin kilt was an easy and natural one; and it need only be noted that the transition is still incomplete, since the feathered pelt is unquestioningly substituted for the fabric whenever occasion demands, yet that the kilt in some form must be much more archaic than the wammus, since it is correlated with the pudency sense,¹ while the complete garment is not so correlated save in slight and incipient degree.

Accordingly the three articles of apparel may be seriated genetically as (1) the pelican-skin robe, used long as a kilt, and only lately relegated to emergency use and bedding; (2) the well-differentiated wammus of textile fabric with hair-cord fastenings; and (3) the textile kilt, with or without a hair-cord belt. And the three artifacts are local and presumptively—indeed manifestly—autochthonous, and exemplify the interdependence of artifacts and environment no less strikingly than the Seri balsa or basket or jacal.

TOOLS AND THEIR USES

In advanced culture tools are finished products, made and used in accordance with preconceived designs or established arts for the production of commodities; in primal life (as well exemplified by Seri handicraft) tools are mere by-products incidental to the largely instinctive activities directed toward the maintenance of life. Accordingly, the tools of advanced culture form the nucleus of industries, while the designless tools of the prime cluster about the outskirts of industrial

¹In this writing the conclusion reached in an unpublished discussion of the beginning of clothing is assumed—i. e., that the primal apparel was purely protective, and that the habitual concealment of portions of the body incidental to its wearing gradually planted the pudency sense. The germ of clothing, without attendant pudency, is well illustrated in Karl von den Steinen's observations and discussions of the Brazilian natives (*Unter den Naturvölkern Zentral-Brasiliens*, Berlin, 1894, pp. 190-199). It is noteworthy that the Seri, more primitive as they are in so many respects than any other American aborigines known, are much farther advanced than the Brazilian natives in appareling and its effects on character. The similarities and the differences are alike interesting; yet in both cases the costumes reflect environmental conditions and needs with remarkable fidelity.

activities; i. e., in developed industries the tool is a primary factor, while in nascent industries it is but a collateral.

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries.

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth.

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles.

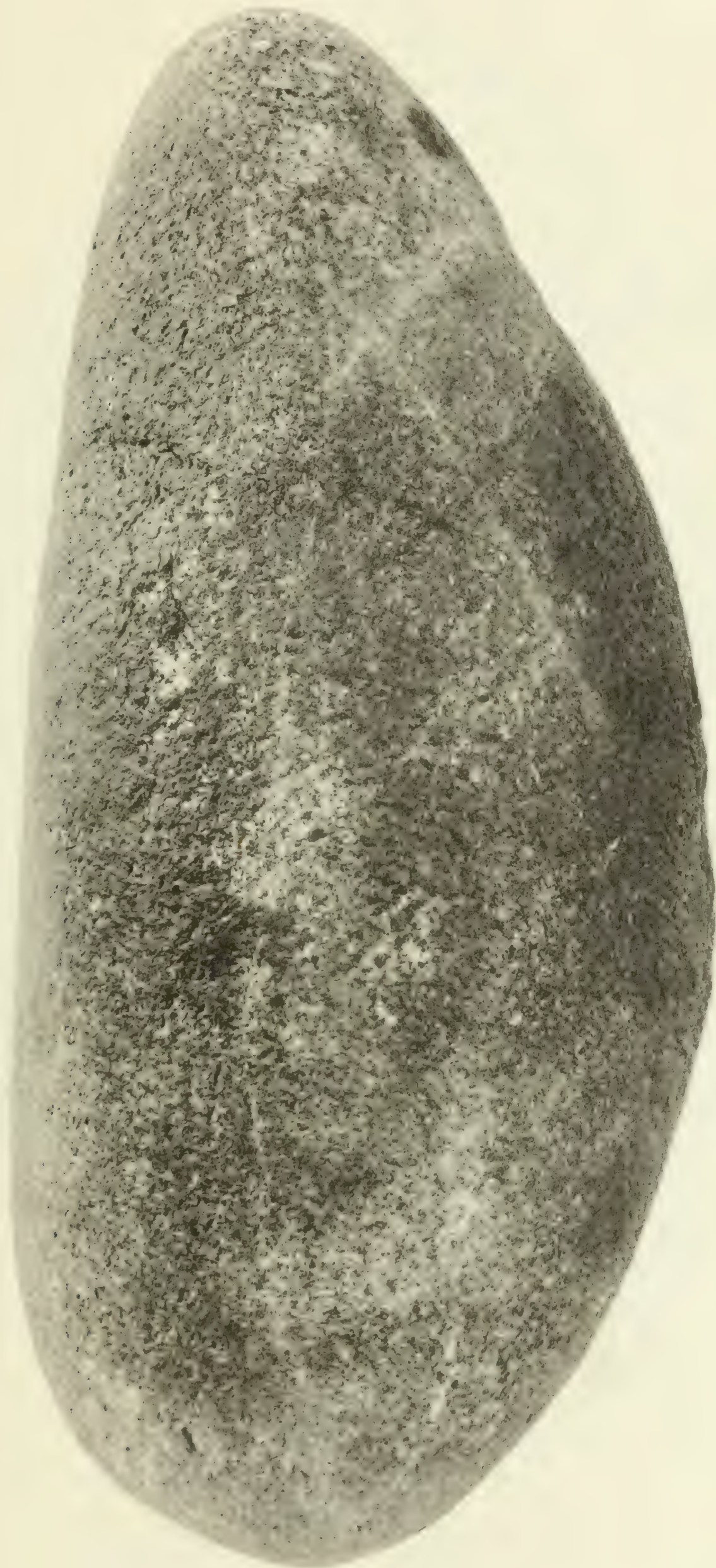
The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Macra*, *Arca*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and face-

paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint-cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

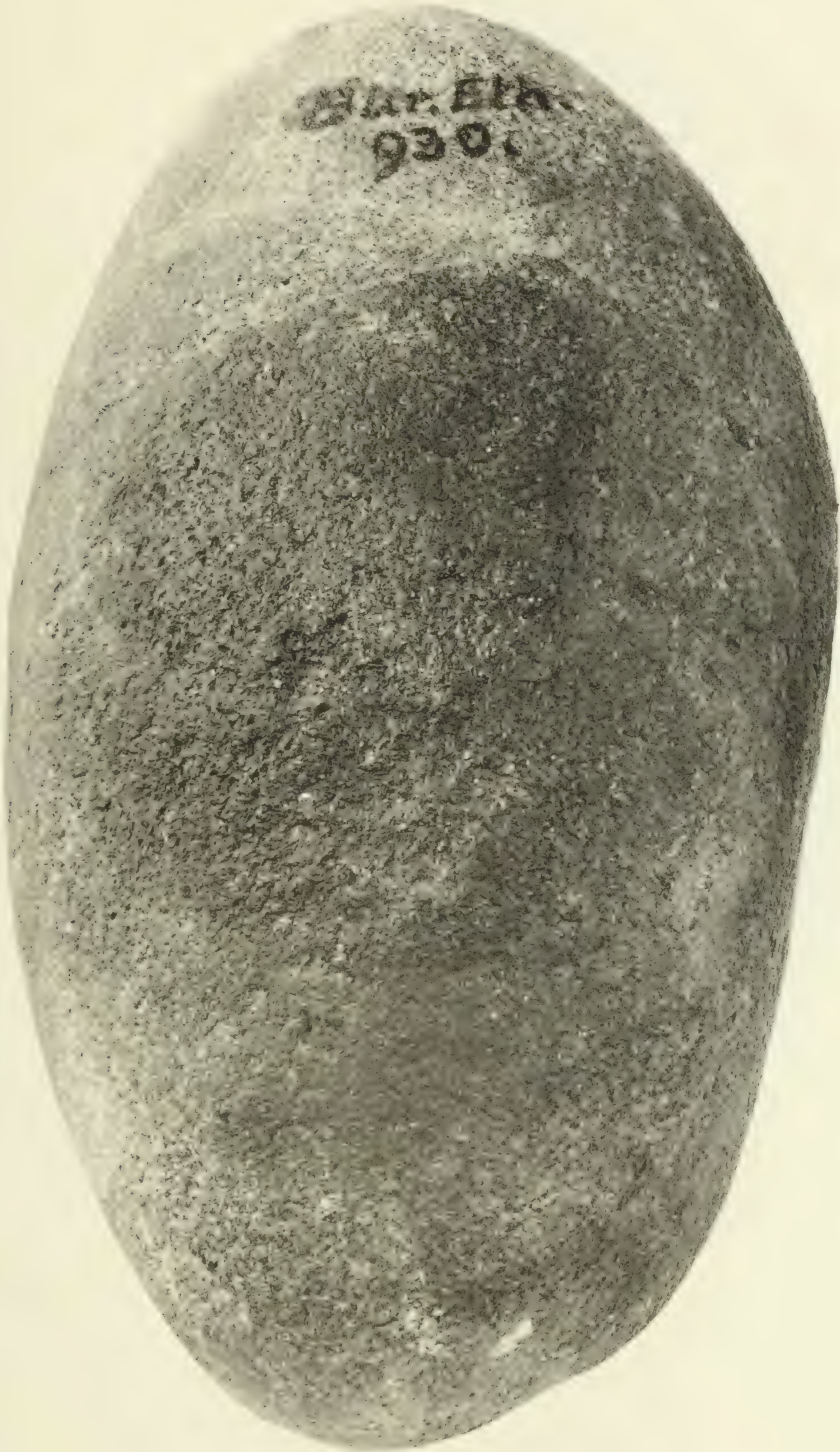
Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to boulders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

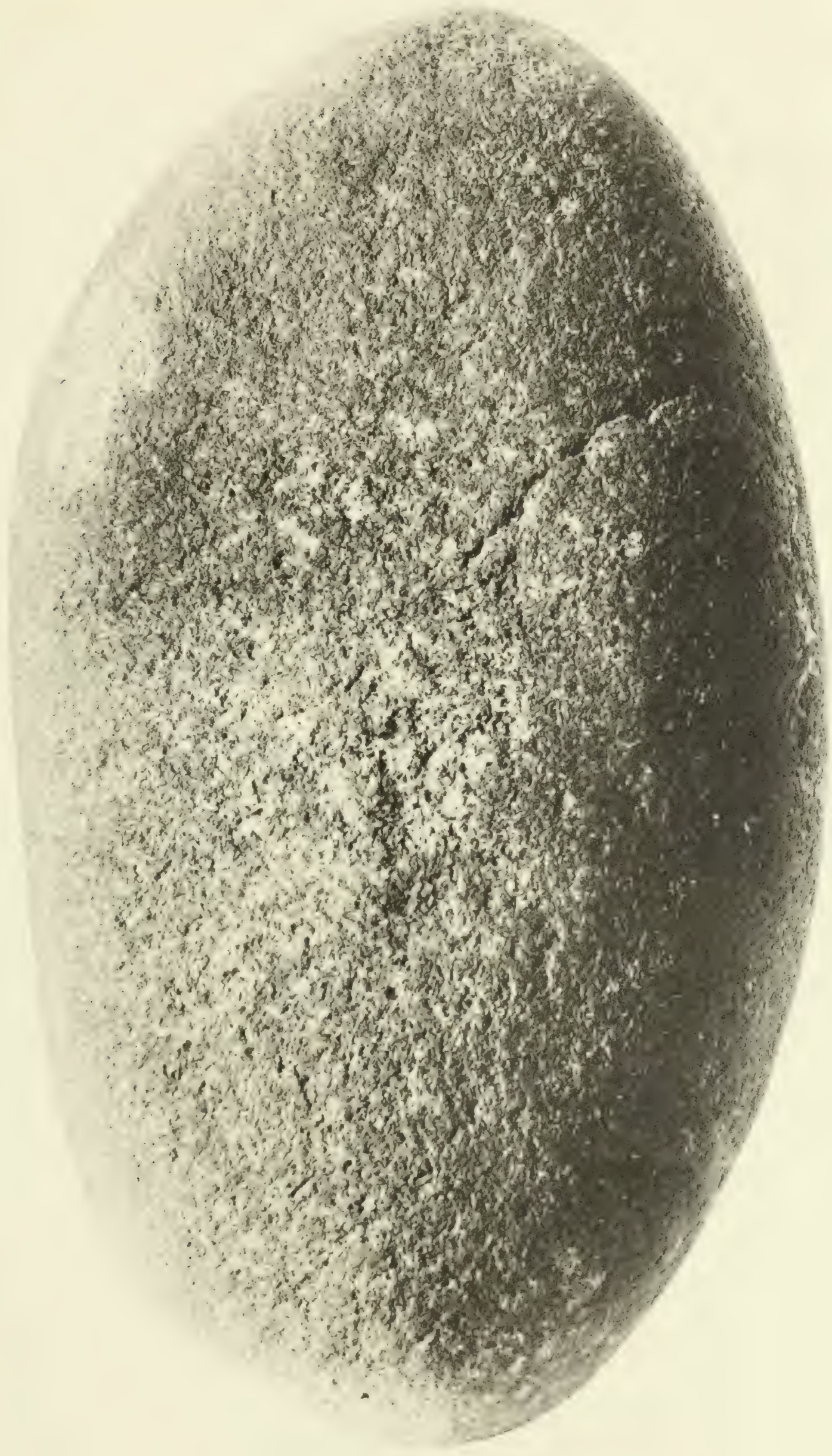
The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahst* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the



DOMESTIC ANVIL, SIDE



DOMESTIC ANVIL, TOP



DOMESTIC ANVIL, BOTTOM

smaller implement is *hupf* or *kupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.¹ The local terms *ahst* and *hupf* are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.²

A typical specimen of intermediate size, used commonly as an *ahst*, but susceptible of employment as a *hupf*, is illustrated (natural size) in plates XXXV and XXXVI.³ It is a hard, tough, hornblende-granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Rada Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the *hupf* depicted in plate XLII. In its last use the unwieldly cobble served as an *ahst*, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length $8\frac{1}{4}$ inches = 210 cm.). It is of tough

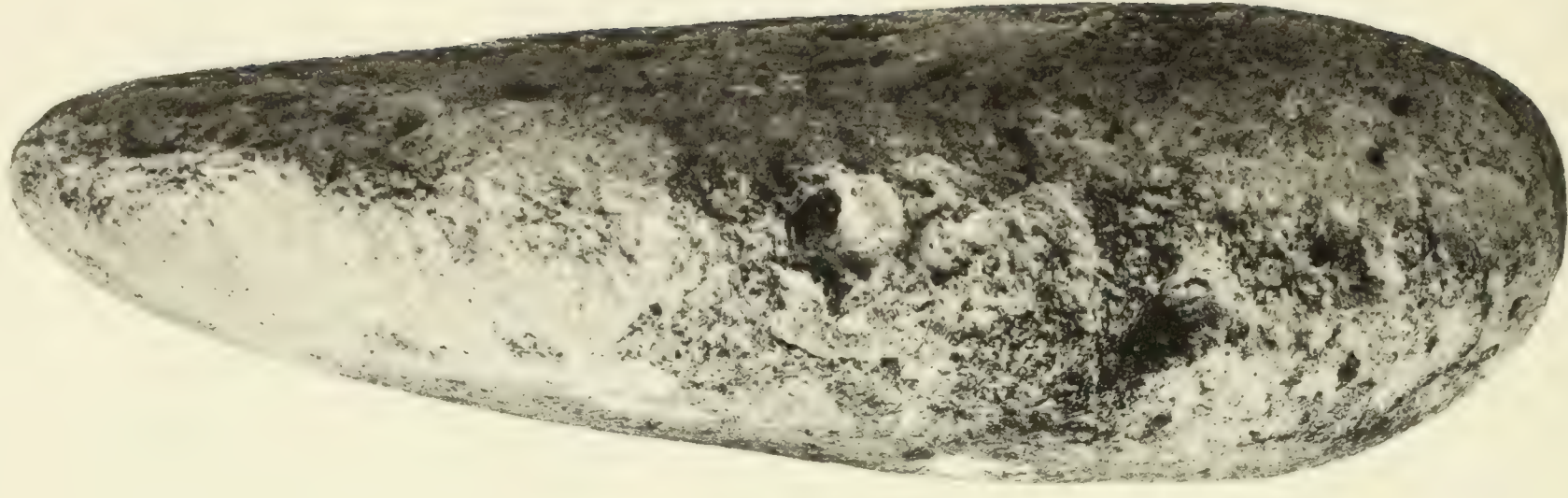
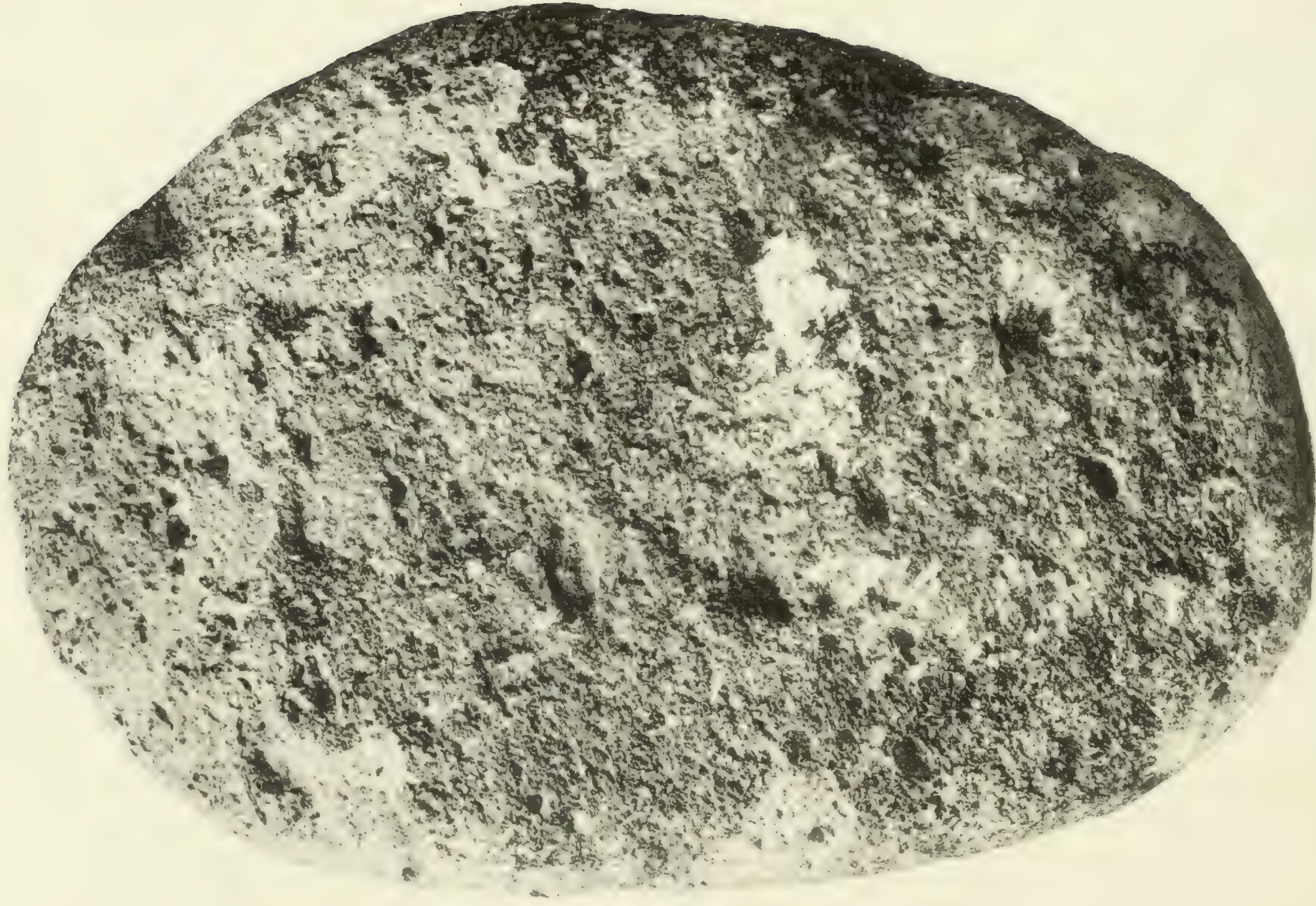
¹ The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the acorn Indians of California, who fail to apperceive the manufacture of their own mills and who conceive that their boulder mortars and creek-pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated; and a similar state of mind persists among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the stone tomahawks occasionally surviving, but regard the implements as fruits of discovery or treasures-trove only.

² It should be noted that the terms used in the titles of the accompanying plates are not denotive, but merely descriptive.

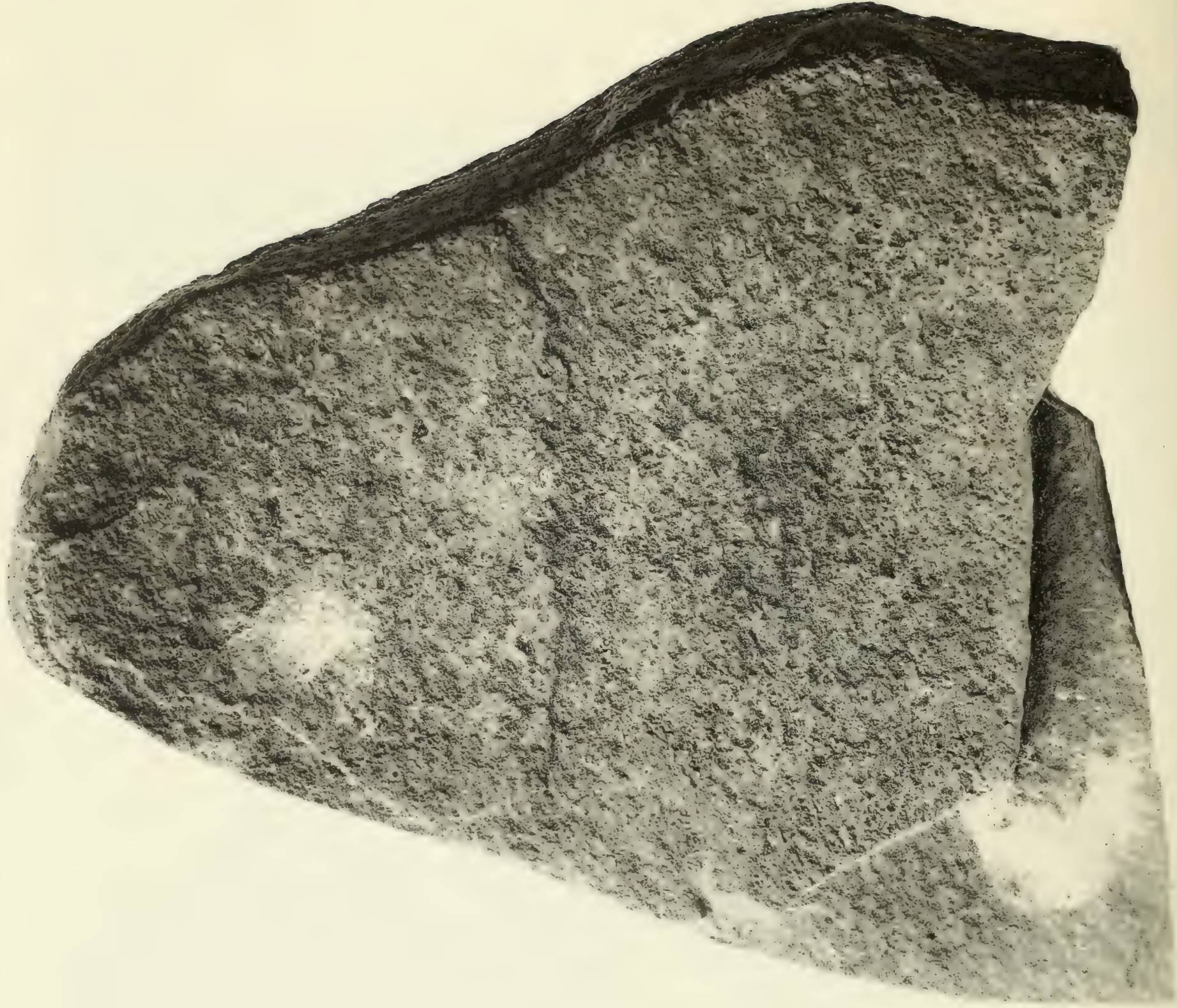
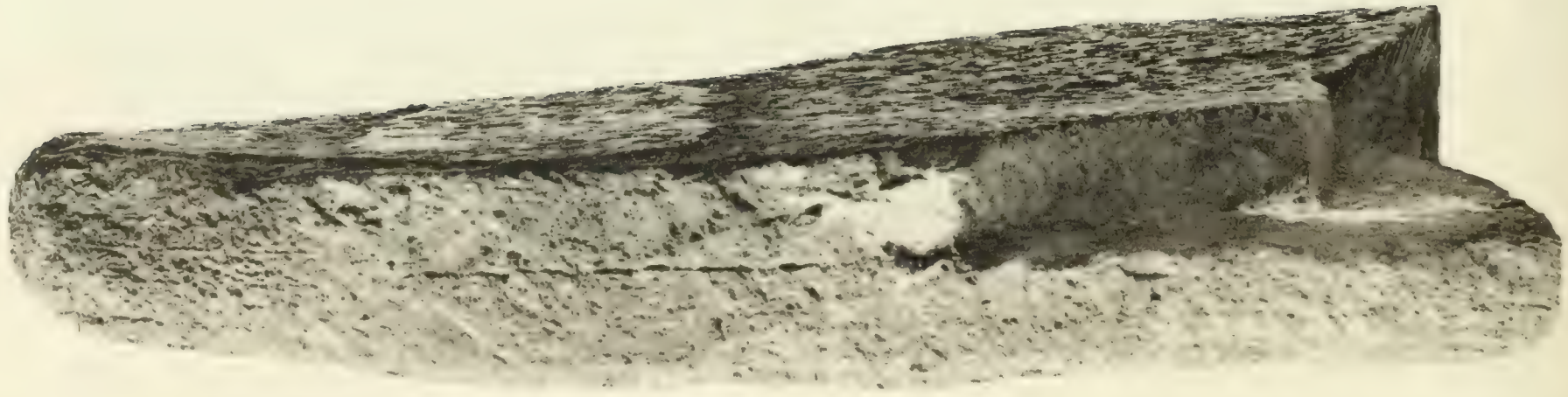
³ This, like the other illustrations of the series (except plate LVI, which is a lithograph, partly process and partly handwork), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

but slightly vesicular and pulverulent volcanic tuff, pinkish-buff in color, and weighs 4 pounds 1 ounce (1.84 kilograms). The form and surface are almost wholly natural, save for slight battering about the larger end and severer battering, with the dislodgment of a flake, about the thinner end; yet the faces are smeared with blood and grease and flecked with turtle debris, and bear a few marks of hupf blows, as is shown in the reproduction. This specimen was found at a temporary camp of a small party on Punta Miguel, where it had been used in breaking up a turtle—the camp having been abandoned so precipitately that a considerable part of the quarry, with this hupf, the ahst illustrated in plate LIV, the turtle-harpoon shown in figure 20, the half-made fire, and the fire-sticks used in kindling it, were left behind. The specimen is a good example of the cobbles carried into portions of the territory lacking the material (the camp at which it was found was on the great sandspit forming the eastern barrier of Boca Inferno, several miles from the nearest pebbly shore); it is of less specific gravity than the average rocks of the region, and looks still lighter by reason of its color and texture. Similar cobbles abound along the eastern coast of Tiburon, being derived from the immense volcanic masses of Sierra Kunkaak.

About the more permanent rancherias and on many abandoned sites lie ahsts usually too heavy for convenient transportation. In the habitable jacales such stones form regular household appurtenances, without which the menage is deemed incomplete; though the implement is commonly kicked about at random, often buried in debris (perhaps to be completely lost, and brought to light only by geologic changes, as demonstrated by the shell-heap of Punta Antigualla), and pressed into service only in case of need. An exceptionally well-worn specimen of the kind is illustrated in plate XXXVIII (scale one-half linear; maximum width measured on base, $9\frac{1}{4}$ inches = 235 cm.). The material is a hard, ferruginous, almost jaspery quartzite, somewhat obscurely laminated. It weighs 10 pounds 11 ounces (4.85 kilograms). It is a natural slab, evidently from a talus rather than the shore, its native locus being probably the western slope of Sierra Seri. The edges and apex are formed by natural fractures; the most-used face (that shown in the plate) is a natural structure plane; the obverse side is partly a similar plane, partly irregular; while the base is an irregular fracture, evidently due to accident after the specimen had been long in use, though the fracture occurred years or decades ago, as indicated by the weathering of the surfaces. The entire face of the slab is worn and more or less polished by use as a metate, the wear culminating toward the center of the base (evidently the center of the original slab), where the hollowing reaches some three-sixteenths of an inch (5 mm.); yet even in the depths of the incipient basin the polished surface is broken by irregular pitting of a sort indicating occasional use as an anvil. The edges are quite unworn, but the smoother portion of the obverse is



DOMESTIC ANVIL (REDUCED), TOP AND SIDE



1/2

METATE (REDUCED), EDGE AND TOP

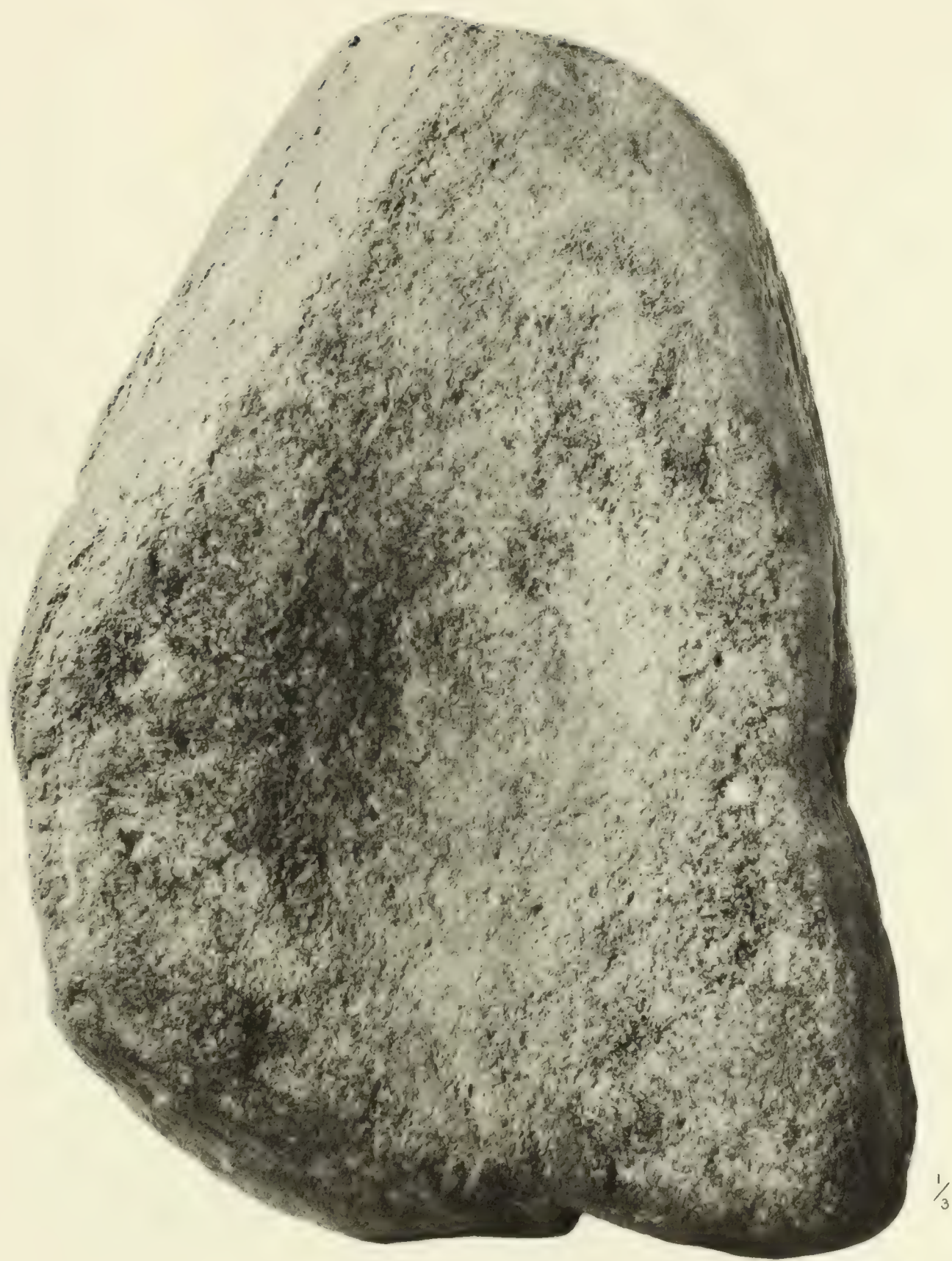
worn and polished like the face, though to a less degree. The specimen was found at a recently occupied jacal, midway between Punta Antigualla and Punta Ygnacio; it lay in the position of use, though half concealed by a cholla thrown over it, with the hupf shown in plate LVI; it was soaked with fat and smeared with the debris and intestinal contents of a turtle, as partly shown in the illustration.

The largest ahst seen in Seriland is illustrated in plates XXXIX and XL, on a scale of one-third linear (its maximum length being $15\frac{3}{8}$ inches = 39.5 cm.); it is a dark, fine-grained silicious schist or quartzite, quite obscurely laminated; it weighs 33 pounds 8 ounces (15.20 kilograms). It is a natural slab, probably washed from a talus and slightly wave-worn; it might have come originally from either the southwestern flanks of Sierra Seri or the more southerly half of Sierra Kunkaak—certainly hundreds of similar slabs strew the eastern shore of Bahia Kunkaak, while the western shore, especially about Punta Narragansett, would yield thousands. Its artificial features (aside from miscellaneous battering) are limited to grinding of the two faces defined by structure planes. The principal face is abraded into an oblong or spoon-shape basin, about 8 inches (20 cm.) long, 5 inches (16 cm.) broad, and fully three-fourths of an inch (2 cm.) deep, the basin penetrating two or three laminae of the slab in such wise as to produce the annular markings faintly shown in plate XXXIX; the obverse is slightly rubbed and ground and somewhat battered, like the face of the preceding specimen; and both sides are flecked with a fine but dark flour-like substance (doubtless derived from grinding mesquite beans, etc) forced into the texture of the stone by the grinding process. The entire slab is greasy and blood-stained, while battered spots about the edges and angles of the principal face record considerable use as an anvil for breaking up quarry—indeed, shreds of turtle flesh and bits of intestinal debris still lodge in some of the interstices. The specimen was taken from the old rancheria at the base of Punta Tormenta, where it had apparently been in desultory use for generations.

A sort of connecting link between ahst and hupf is afforded by elongate beach pebbles, such as that illustrated in plate XLI, which lay beside the large ahst last described, and which bears a few inconspicuous marks of use in slight battering at both ends, with a few shreds of turtle flesh about the blunter extremity (at the right on the plate). The specimen is shown natural size; it is of pinkish-gray trachyte (?), and weighs 1 pound 12 ounces (0.79 kilograms). It is noteworthy chiefly as an illustration of the Seri mode of seizing and using hand-implements (a mode repeatedly observed at Costa Rica in 1894); the pebble comfortably fits the Caucasian hand, held hammerwise; it is intuitively grasped in this way, and when so seized and used with an outward swing forms an effective implement for bone-crushing, etc, the natural striking-point being near the free end; but the centripetally moving Seri invariably seizes the specimen in such manner that the

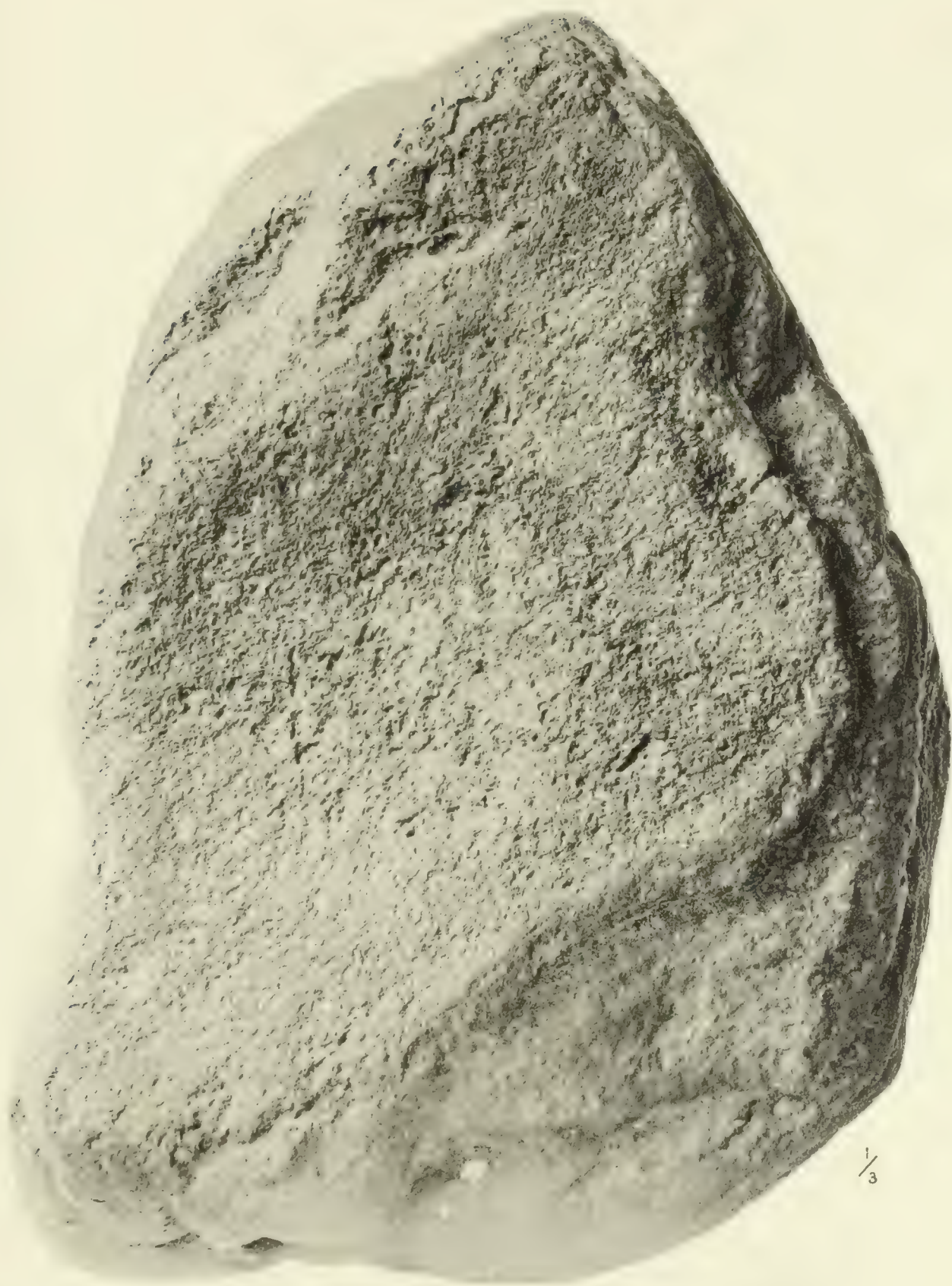
free end is directed inward, while the thumb laps over the grasped end, when the strokes are directed downward and inward, the striking-point being the extreme tip of the free end. A similar specimen is illustrated in plate XLII. It is of tough and homogeneous hornblende-granite, somewhat shorter and broader than its homologue, but of exactly the same weight; it, too, is battered at the ends, but is otherwise quite natural in form. It was collected at Rada Ballena in conjunction with the ahst illustrated in plate XXXV; and like that specimen it is soaked with blood and fat, and bore shreds of flesh when found. Both these elongate cobbles are of interest as representatives of a somewhat aberrant type; for the favorite form of hupf is shorter and thicker, as shown by the prevailing shapes, both in use and lying about the jacales—indeed, the elongate form is seldom used on the coast and never carried into the interior.

A typical hupf is illustrated in plate XLIII. The specimen is of fine-grained, dense, and massive quartzite, its homogeneity being interrupted only by a thin seam of infiltrated silica and by an obscure structure-plane brought out by weathering toward the thinner end. Its weight is 1 pound 14 ounces (0.85 kilogram). In general form and surface the specimen is an absolutely natural pebble, such as may be found in thousands along the shores of Seriland. Its artificial features are limited to slight battering about the edges, especially at the thinner end; partial polishing of the lateral edges by repeated handling (as imperfectly shown in the edge view); very perceptible polishing of both faces by use as a grinder; some fire-blackening on both sides; semisaturation with grease and blood; and the flecks of red face-paint shown in the reproduction. The specimen was obtained at Costa Rica after some days' observation of its use. The chief observed functions of this implement were as follows: (1) Skinning the leg of a partially consumed horse; this was done by means of centripetal (i. e., downward and inward) blows, so directed that the thinner end fell obliquely on the tissue, bruising and tearing it with considerable rapidity. (2) Severing tough tendons already sawed nearly through by rubbing over the edge of an ahst, the hupf in this case being in the hands of a coadjutor and used in rather random strokes whenever the tissue seemed particularly refractory. (3) Knocking off the parboiled hoof of a horse to give access to the coffinbone. (4) Crushing and splintering bones to facilitate sucking of the marrow. (5) Grinding mesquite beans; the process being begun by vertical blows with the end of the implement on a heap of the pods resting on an ahst, continued by blows with the side, and finished by kneading and rubbing motions similar to those of grinding on a metate. (6) Pounding shelled corn mixed with slack lime, in a ludicrously futile attempt to imitate Mexican cookery. (7) Chopping trees; in this case the implement was grasped in the centripetal manner and used in pounding and bruising the wood at the point of greatest bending under the pull of a coadjutor. (8) Cleaving and



$\frac{1}{3}$

LONG-USED METATE (REDUCED), TOP



LONG-USED METATE (REDUCED), BOTTOM

breaking wood for fuel. (9) Dethorning okatilla stems, by sweeping centripetal strokes delivered adzwise from top toward butt of a bunch of stems lying on the ground. (10) Severing a stout hair cord; in this use it was grasped between the knees of a matron squatting on the ground, while the cord was held in both hands and sawed to and fro over the use-roughened thinner end. (11) Supporting a kettle (shown in plate X) as one of the fire-stones used in frontier mimicry of the Papago custom. (12) Triturating face-paint by pounding and kneading; in one case the specimen served as a hand implement, while in another case it took the place of the ahst, the ocher lump itself being struck and rubbed against it. (13) Beating a troop of dogs from a pile of bedding in a jacal; in this use the implement was held in the customary manner and used in swift centripetal blows, the matron relying on her own swiftness and reach and not at all on projection to come within reach of her moving targets; the blows usually landed well astern, and were so vicious and vigorous as to have killed the agile brutes had they chanced to fall squarely—indeed, one blow temporarily paralyzed a large cur, which escaped only by running on its fore feet and dragging its hind quarters. In most of these uses the specimen was employed in conjunction with an improvised ahst in the form of a stone carried from the rancho. Several of the processes, notably those of tissue-tearing and dog-beating, were executed with a vigor and swiftness quite distinct from the sluggish lounging of the ordinary day-tide and, indeed, partaking of the fierce exaltation normal to the Seri chase. When not in use the implement usually lay just within the open end of the owner's jacal, though it was often displaced and sometimes kicked about the patio for hours. It was one of perhaps a dozen similar implements brought across the desert from the coast by as many matrons. All were regarded as personal belongings pertaining to the custodians about as definitely as articles of apparel, though rather freely loaned, especially in the owner's clan. The specimen was purchased from the possessor, who parted from it rather reluctantly, though with the tacit approval of her clanswomen, at a rate implying considerable appreciation of real or supposed value. Three or four other matrons declined to barter their hupfs, either arbitrarily or on the plea that they were a long way from the source of supply.

A common variety of hupf is illustrated in plate XLIV. It is of pinkish, slaty tuff of rather low specific gravity, somewhat vesicular and pulverulent, though moderately hard and tough. It weighs 17 ounces (0.48 kilogram). In form and surface it is essentially a wave-worn pebble, doubtless derived originally from the volcanic deposits of Sierra Kunkaak. Its artificial markings are limited to slight battering about the edges, especially at the thinner end (as shown in the edge view); slight rubbing, striation, and semipolishing of the smoother face (shown in the plate); a few grease spots and a stain showing use in crushing sappy vegetal matter, also on this face; and an inconspicuous

fire-mark on the obverse. It was found in a recently abandoned jacal near Campo Navidad. It is one of the three tuff specimens among those collected, one of a dozen or two seen; perhaps 10 per cent of the implements observed in Seriland are of this material, and it is significant that this ratio is several times larger than the proportion of tuff pebbles to the entire paving of the beaches, so that the material seems to be a preferred one. The preference was indeed discovered at Costa Rica in 1894, where two or three of the more highly prized hupfs were of this material, and where vague intimations were obtained that it is especially favored for meal-making, doubtless by reason of the association of color and texture—associations that mean much to the primitive mind, perhaps in suggesting that the grinding is easier when done by a soft implement. An economic reason for the preference is easily found in the lower specific gravity, and hence the greater portability of a hupf of ordinary size, of this material; but there is nothing to indicate that this economic factor is weighed or even apperceived by the Seri.

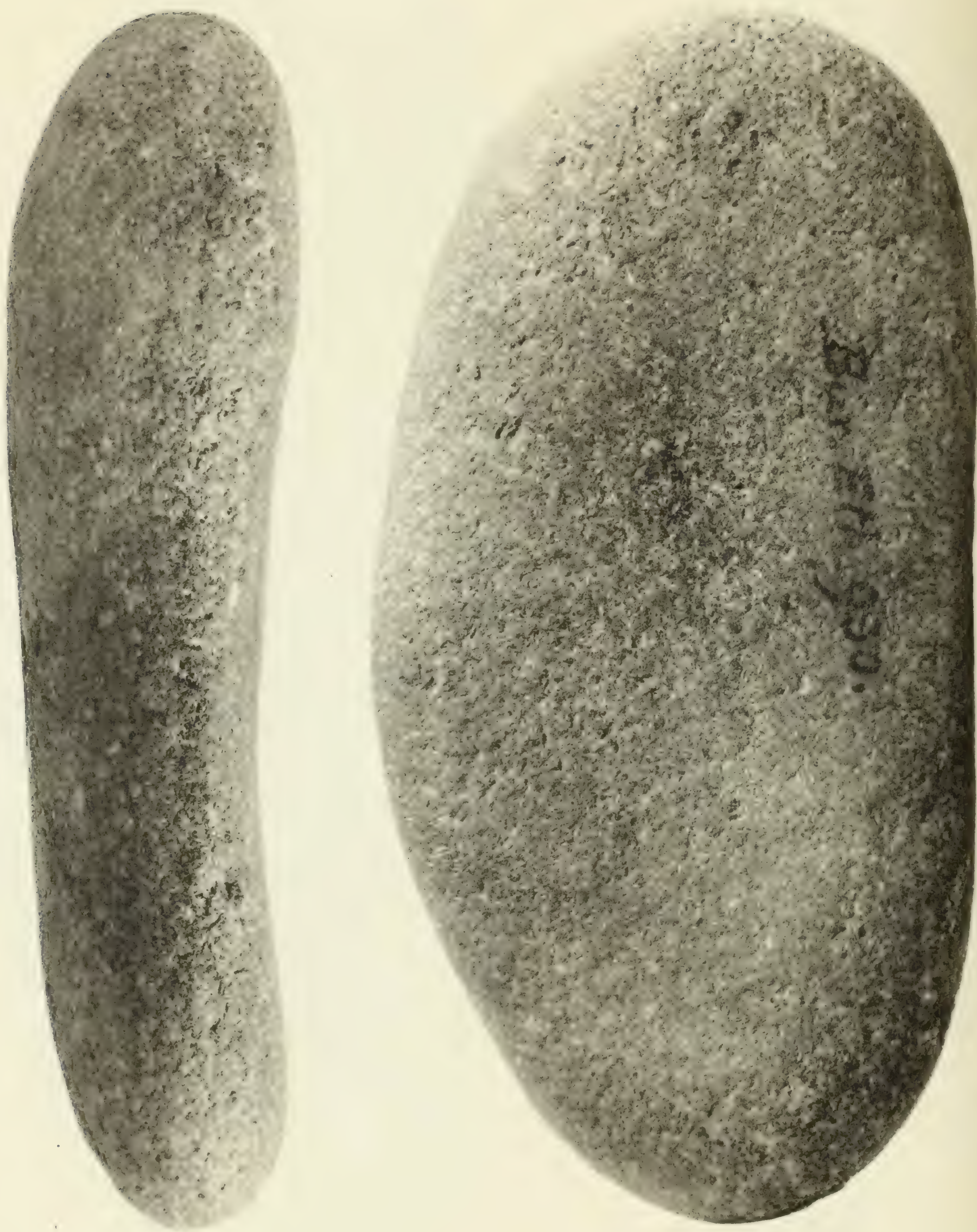
A typical pebble bearing slight marks of use is illustrated in plate XLV. It is of fine-grained pinkish sandstone, probably tuffaceous, and is fairly hard and quite tough; it weighs 1 pound 9 ounces (0.71 kilogram). It is wholly natural in form and surface save for slight battering or pecking on the face illustrated, and for a few stains of grease and abundant marks of fire. It was found in a fire still burning (and abandoned within a half-hour, as indicated by other signs) two or three miles inland from Punta Granita on the Seri trail toward Aguaje Parilla, whither it had evidently been carried from the coast.

A fairly common material for both hupfs and ahsts is highly vesicular basalt grading into pumice stone, the material corresponding fairly with a favorite metate material among the Mexicans. The rock was not certainly traced to its source, but seems to come from the northern part of Sierra Kunkaak. A typical hupf of this material is shown in plate XLVI; it weighs 1 pound 13 ounces (0.82 kilogram). It is wholly natural in every respect save for slight grinding and subpolishing, with some filling of interstices, on both faces. From the slight wear of this specimen, together with the absence of battering, and from similar features presented by others of the class, it may be inferred that implements of this material are habitually used only for grinding—for which purpose they are admirably adapted. The specimen emphasizes the importance of the hupf in Seri thought, for it was one of a small series of mortuary sacrifices from a tomb at Pozo Escalante (ante, p. 290).

Throughout the surveys of Seriland, constant search was made for cutting implements of stone; and the nearest approach to success was exemplified by the specimen illustrated in plate XLVII. It is of bluish-gray volcanic rock (not specifically identified) of close texture and decided toughness and hardness; it weighs 10 ounces (0.28 kilogram). In greater part its form and surface are natural, but a projecting por-



NATURAL PEBBLE BEARING SLIGHT MARKS OF USE



THE HELIOTYPE PRINTING CO., BOSTON

NATURAL PEBBLE USED AS BONE-CRUSHER

tion brought out by weathering on one side is split off, presumably by intention, and the fractured surface thus produced is partly smoothed by rubbing, probably in use, though possibly by design. The edges are more or less battered, especially at the ends, and several rude flakes have been knocked off, evidently at random and presumably in ordinary use as an ahst. The smoother face is wholly natural. The specimen was picked up in a jacal at Rada Ballena, but bore no marks of recent use.

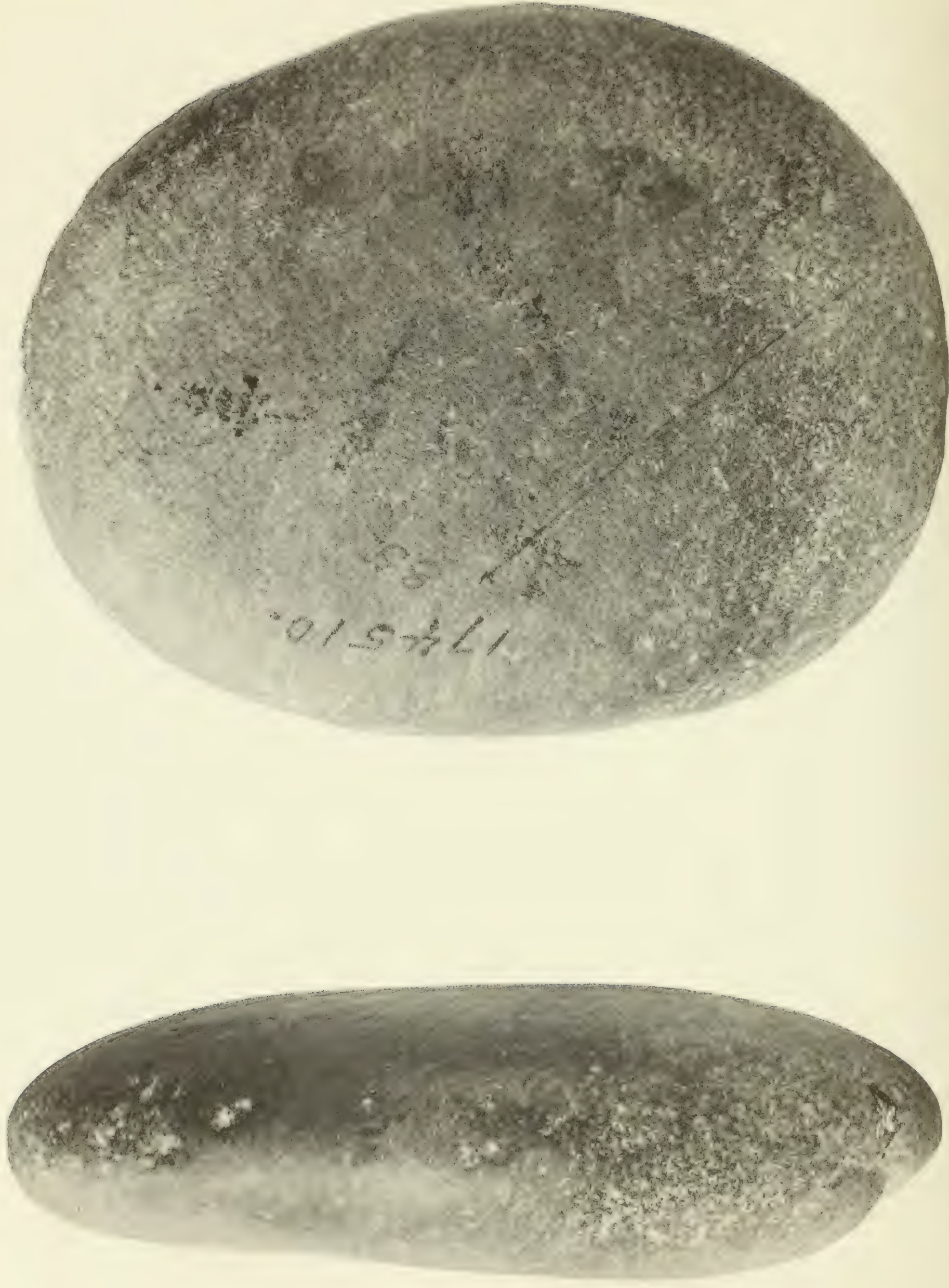
A tuff implement of suggestively ax-like form is shown in plate XLVIII; it is firmer and less pulverulent but more vesicular than most implements of its class; it weighs but 7 ounces (0.20 kilogram). The specimen was picked up in a ruinous jacal, which had evidently been occupied temporarily within a fortnight, on the summit of the great shell-mound forming Punta Antigualla. The somewhat indefinite texture and color render it difficult to distinguish between natural and artificial features; but careful examination indicates that it is wholly natural in form and in nine-tenths of the surface, and that the ax-like shape expresses nothing more than accidents of structure and wave-work. This interpretation is practically established by the slight battering along the edges and about the smaller end, as illustrated in the edge view; for this wear of use, which has produced a distinctive surface, is practically absent from the notches which give the ax-like effect. Besides the battering, the only artificial marks are ancient fire-stains on one of the faces. On the whole it is clear that the artificial appearance catching the eye at first glance is purely fortuitous, and that the specimen is but a natural pebble very slightly modified by ordinary use.

A suggestive specimen is illustrated in plate XLIX; it is of purplish-gray granitoid rock, of decided toughness and considerable hardness, and weighs $12\frac{1}{2}$ ounces (0.35 kilogram). The surface and general form indicate that it is a natural pebble entirely without marks of artificial use; but the regular curvature of the principal face (the shape is that of a segment of a cylinder rounded toward the ends) suggests artificial shaping, while it was found far in the interior, near Barranca Salina, whither it must have been carried from the coast. It may possibly be a fragment of a pestle subsequently wave-worn; but all the probabilities are that it is wholly natural, and that its suggestive features are fortuitous.

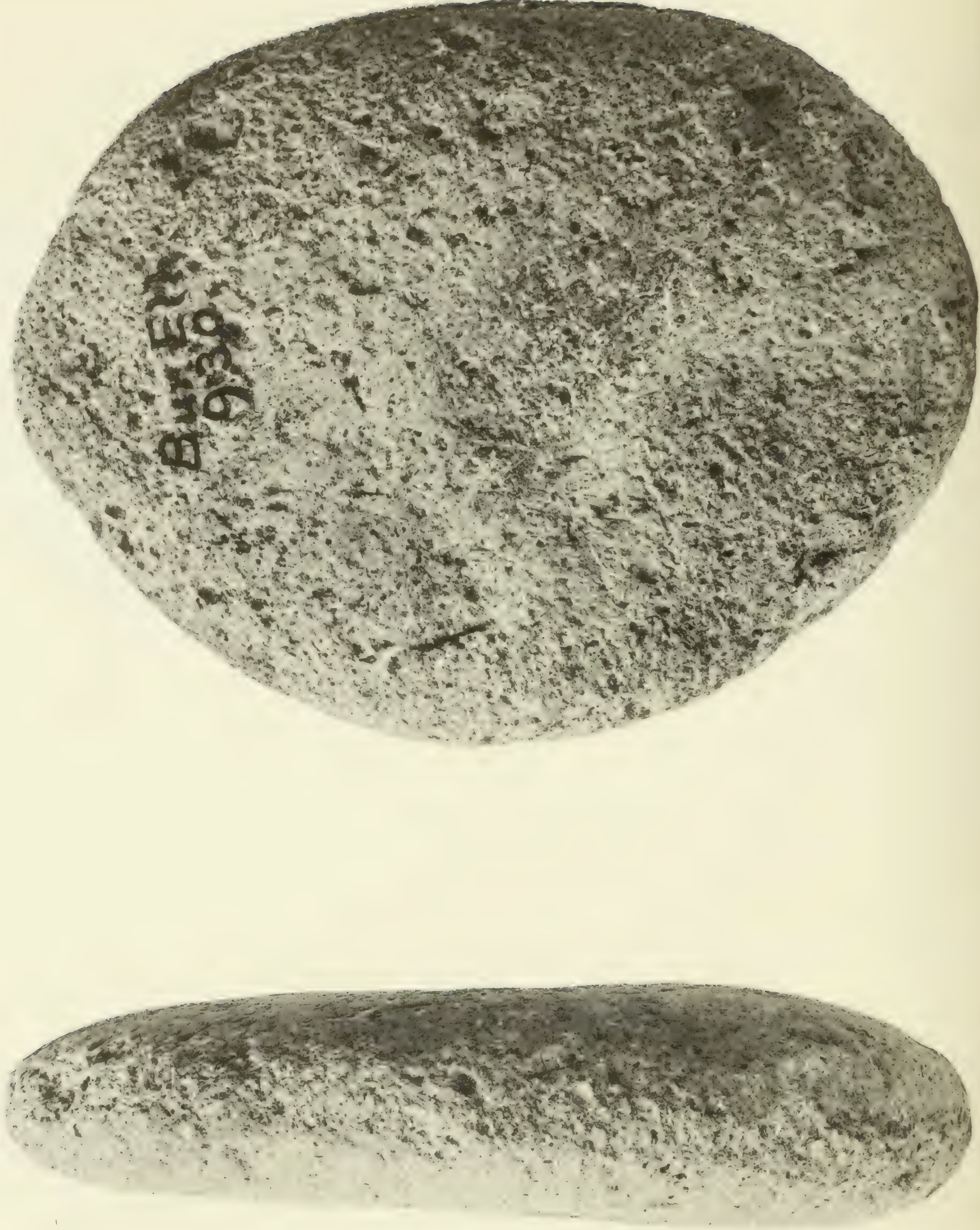
The constant search for chipped or flaked tools which was extended over nearly all Seriland seldom met the slightest reward; but the specimen shown in plate L was deemed of some interest in connection with the search. It is of hard and tough greenstone, showing obscure and irregular structure lines, though nearly homogeneous in texture; it weighs 10 ounces (0.28 kilogram). It is primarily a natural pebble with form and surface reflecting structure and texture in connection with wave-action. Its artificial features are limited to the usual slight battering of the smaller end, still less conspicuous battering or grind-

ing of the margin about the larger end, slight but suggestive chipping of the thinner edge, inconspicuous hand-wear and polish on the principal face, and a few obscure scratches or striae on the same face, as illustrated in the plate. The position and character of the flake-fractures, which are fairly shown in the edge view, indicate that they were made while the pebble was in use as a bruising or cutting tool, a use at once suggested to the Caucasian mind by the form of the pebble; yet it is noteworthy that its thin edge displays less battering than either end of the object and no more than the opposite and thicker edge, while it is still more significant that the specimen was apparently discarded immediately on the modification of form by the spalling—a modification greatly increasing its efficiency, as all habitual users of chipped stone tools would realize. The specimen is one of a large number of examples showing that whenever a hupf is broken in use it is regarded as ruined, and is immediately thrown away. This particular specimen is archaic; it was found in the cliff-face of the great shell-heap at Punta Antigualla, embedded in a tiny stratum of ashes and charcoal (some of which still adheres, as shown in the black flecking at the outer end of the striae), associated with scorched clamshells, typical Seri potsherds, etc, some 40 feet beneath the surface.

While the great majority of the hupfs are mere pebbles bearing slight trace of artificial wear, as illustrated by the foregoing examples, others bear traces of use so extended as to more or less completely artificialize the surface. A typical long-used hupf is depicted in plates LI and LII. It is a tough and hard quartzite, dark gray or brown in color, massive and homogeneous in texture; it weighs 2 pounds 4 ounces (1.02 kilograms). In general form it is a typical wave-worn pebble of its material, and might be duplicated in thousands along the shores of Bahia Kunkaak and El Infiernillo; but fully a third of its surface has been more or less modified by use. The flatter face (plate LI) is smeared with blood, grease, and charcoal, which have been ground into the stone by friction of the hand of the user in such manner as to form a kind of skin or veneer; portions of the face bear a subpolish, due probably to the hand-rubbing in use; near the center there is a rough pit about an eighth of an inch (3 mm.) deep, evidently produced by pecking or battering with metal, while three or four neighboring scratches penetrating the veneer appear to record ill-directed strokes of a rather sharp metal point. In the light of observed customs it may be inferred that this pitting was produced by use of the implement as an anvil or ahst in sharpening a harpoon-point and fitting it into its foreshaft. The thinner edge (shown in plate LI; that toward the right in the face view on the same plate) displays considerable battering of the kind characteristic of Seri hupfs in general; it is smoked and fire-stained, as shown, while the lower rounded corner is worn away by battering to a depth of probably one-fourth inch (5 mm.). The obverse face reveals more clearly the battering about both corners and edges,



LITTLE-WORN PEBBLE USED FOR ALL DOMESTIC PURPOSES



NATURAL PEBBLE USED AS CRUSHER AND GRINDER

including the dislodgment of a flake toward the narrower end; but its most conspicuous feature is a broad subpolished facet (rounding slightly toward the thinner edge) produced by grinding on a flat-surface ahst. This face, too, exhibits fire-staining, while the surface beyond the facet—and to a slight extent the facet itself—is veneered like the other face. There are a few scratches on this side also, as well as a slight pitting due to contact with metal. The thicker edge (plate LII) displays considerable battering, especially a recent pitting near the middle evidently due to use as an anvil held between the knees for sharpening a harpoon point by rude hammering. The specimen was one of a score of implements lying about the interior of the principal jacal in the great rancheria at the base of Punta Tormenta (illustrated in plate VII).

A related specimen, though of somewhat aberrant form, is illustrated in plate LIII. It is of peculiarly tough and quite hard greenstone and weighs 2 pounds 1 ounce (0.93 kilogram). Somewhat less than half of the surface is that of a wave-worn pebble; the remainder is either battered out of all semblance to wave-work, or thumb-worn by long-continued use. The object well illustrates the choice of the most prominently projecting portion of the hand-implement as the point of percussion, and consequently the concentrated wear on such portions whereby the object is gradually reduced to better-rounded and more symmetric form. This specimen displays some minor flaking, apparently connected with the battering and regarded by the user as subordinate to the general wear. It was found at Punta Tormenta, concealed in the wall of a jacal, as if preserved for special use.

One of the best-known examples of a use-perfected hupf is illustrated in plate LIV. It is of coarse-grained but massive and homogeneous granite, similar to that forming Punta Blanca, Punta Granita, and, indeed, much of the eastern coast of Bahia Kunkaak. It weighs 1 pound 10 ounces (0.74 kilogram). In general form it is just such a pebble as is produced from this material by wave-wear, and might be duplicated along the shores in numbers. The artificial surfaces comprise (1) both ends, which are battered in the usual manner; (2) both lateral edges, of which one is slightly battered and worn, while the other is somewhat battered and also notched, evidently by a chance blow and the dislodgment of a flake; (3) both faces, which are flattened by grinding, while one of them (that shown in the plate) is slightly pitted, evidently by metal-working; so that the natural surface is restricted to small areas about the corners. The implement was found at the camp site on Punta Miguel, already noted (page 189), whence a group of five Seri were frightened by the approach of the 1895 expedition; it was covered with blood and shreds of turtle flesh, and is still saturated with grease. Moreover, it is quite confidently identified (not only by form and material, but especially by the fortuitous notch) as a hupf seen repeatedly at Costa Rica in 1894; it was the property of a matron of the Pelican clan (whose portrait appears in plate XXII),

who was observed to use it for various industrial purposes, and who refused to part with it for any consideration.

A still more beautiful example of Seri stone art is depicted in plate LV. It is of the same homogeneous and coarse-grained granite as the last specimen, and closely approaches it in dimensions; it is slightly longer and broader, but somewhat thinner, and weighs 1 pound 11 ounces (0.77 kilogram); and, except for the absence of the accidental notch, its artificial features are still more closely similar. The ends are slightly battered, as illustrated in the end view at the right of the plate; the edges are similarly worn, but to a less extent; while both sides have been symmetrically faceted by use in grinding, the facets being straight in the longitudinal direction but slightly curved in the transverse direction, in the shape of the Mexican mano. The specimen displays well-marked color distinctions between the artificially worn and the natural surfaces, the former being gray and the latter weathered to yellowish or pinkish-brown; these colors show that something like two-thirds of the surface is artificial and the intervening third natural; and the natural portion corresponds in every respect, not only in form but in condition of surface, with the granite cobbles of Seriland's stormy shores. Unfortunately the color distinctions, with the limits of faceting and other artificial modifications, are obscure in the photomechanical reproduction; they are indicated more clearly in the outline drawing oversheet. The specimen is partially saturated with fat, and bears an ocher stain attesting use in the preparation of face-paint. It was found carefully wrapped in a parcel with the shell paint-cup illustrated in plate XXVII, a curlew mandible, two or three hawk feathers, and a tuft of pelican down (the whole evidently forming the fetish or medicine-bag of a shamanistic elderwoman), in an out-of-the-way nook in the wall of an abandoned jacal at Punta Narragansett.

A somewhat asymmetric though otherwise typical hupf is illustrated in natural colors in plate LVI. It is of andesite, and may have come originally either from the extensive volcanics of southern Sierra Seri or central Sierra Kunkaak; it weighs 1 pound 15 ounces (0.88 kilogram). The general form is that of a wave-worn cobble, and fully one-third of the surface retains the natural character save for slight smoothing through hand friction in use. The chief artificial modification is the faceting of both sides in nearly plain and approximately parallel faces, the maximum thickness of material removed from each side, estimated from the curvature of the adjacent natural surface, being perhaps three-sixteenths of an inch (5 millimeters); in addition, both ends are battered in the usual fashion, while the thinner and more projecting edge is battered still more extensively, in a way at once subserving convenient use and tending to increase the symmetry of form. One of the facets is quite smooth; the other (that on the right in the plate) is slightly pitted, as if by use in metal-working. The specimen is somewhat greasy—the normal condition of the hupf—and bears



NATURAL PEBBLE SLIGHTLY USED AS HAMMER AND ANVIL

conspicuous records of its latest uses; both faces (more especially the pitted one) are stained with sap from green vegetal substance (probably immature mesquite pods), while one face is brilliantly marked with ocher in such manner as to indicate that a lump of face-paint was partially pulverized by grinding on the slightly rough surface. It was found, together with the ahst illustrated in plate XXXVIII, in the rear of a recently occupied jacal midway between Punta Antigualla and Punta Ygnacio, cached beneath a thorny cholla cactus uprooted and dragged thither for the purpose. The trail and other signs indicated that the jacal had been occupied for a few days and up to within twenty-four hours by a family group of six or seven persons; that it was vacated suddenly at or about the time of arrival of the party of five whose trail was followed by the 1895 expedition from Punta Antigualla to Punta Miguel (where they were interrupted in the midst of a meal and frightened to Tiburon); and that the larger party fled toward the rocky fastnesses of southern Sierra Seri.

Of the foregoing hupfs several are aberrant, and serve merely to illustrate the prevailing directions of departure from the optimum form and size of implements. Six of the specimens may be deemed typical; they are as follows:

Plate No.	Locality	Material	Weight	Condition
			<i>Lb. Ozs.</i>	
XLIII.....	Costa Rica	Quartzite .	1 14 (0.85 kg.)..	Nearly natural.
XLIV	Campo Navidad	Tuff.....	1 1 (.48 kg.) ...	Four-fifths natural.
XLVI	Pozo Escalante.....	Vesicular lava.	1 13 (.82 kg.) ..	Nearly natural.
LIV	Punta Miguel	Granite ...	1 10 (.74 kg.) ..	One-fifth natural.
LV	Punta Narragansett	....do	1 11 (.77 kg.) ..	One-fourth natural.
LVI	South point Sierra Seri.	Andesite ..	1 15 (.88 kg.) ..	One-third natural.

From these specimens a type of Seri hand implement may easily be formulated: it is a wave-worn pebble or cobble of (1) granite, quartzite, or other tough and hard rock, (2) tuff, or other light and pulverulent rock, or (3) vesicular lava; it is of flattened ovoid form, or of biscuit shape; it weighs a trifle under 2 pounds (about 0.85 kilogram); originally the form and surface are wholly natural, but through the chance of use it is modified (*a*) by a battering of the ends and more projecting edges, and (*b*) by grinding and consequent truncation of the sides; though initially a natural pebble, chosen nearly at random from the beach, it eventually becomes personal property, acquires fetishistic import, and is buried with the owner at her death.

The ahsts and the heavier cobbles used alternatively as ahsts and hupfs are too fortuitous for reduction to type; while the protean peb-

bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,¹ and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens;

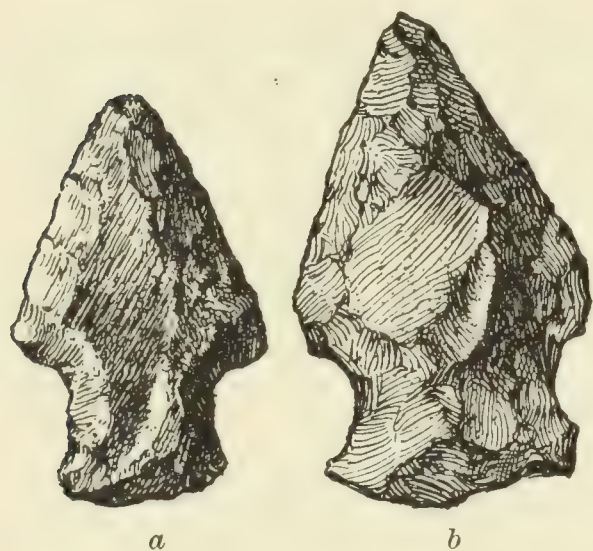


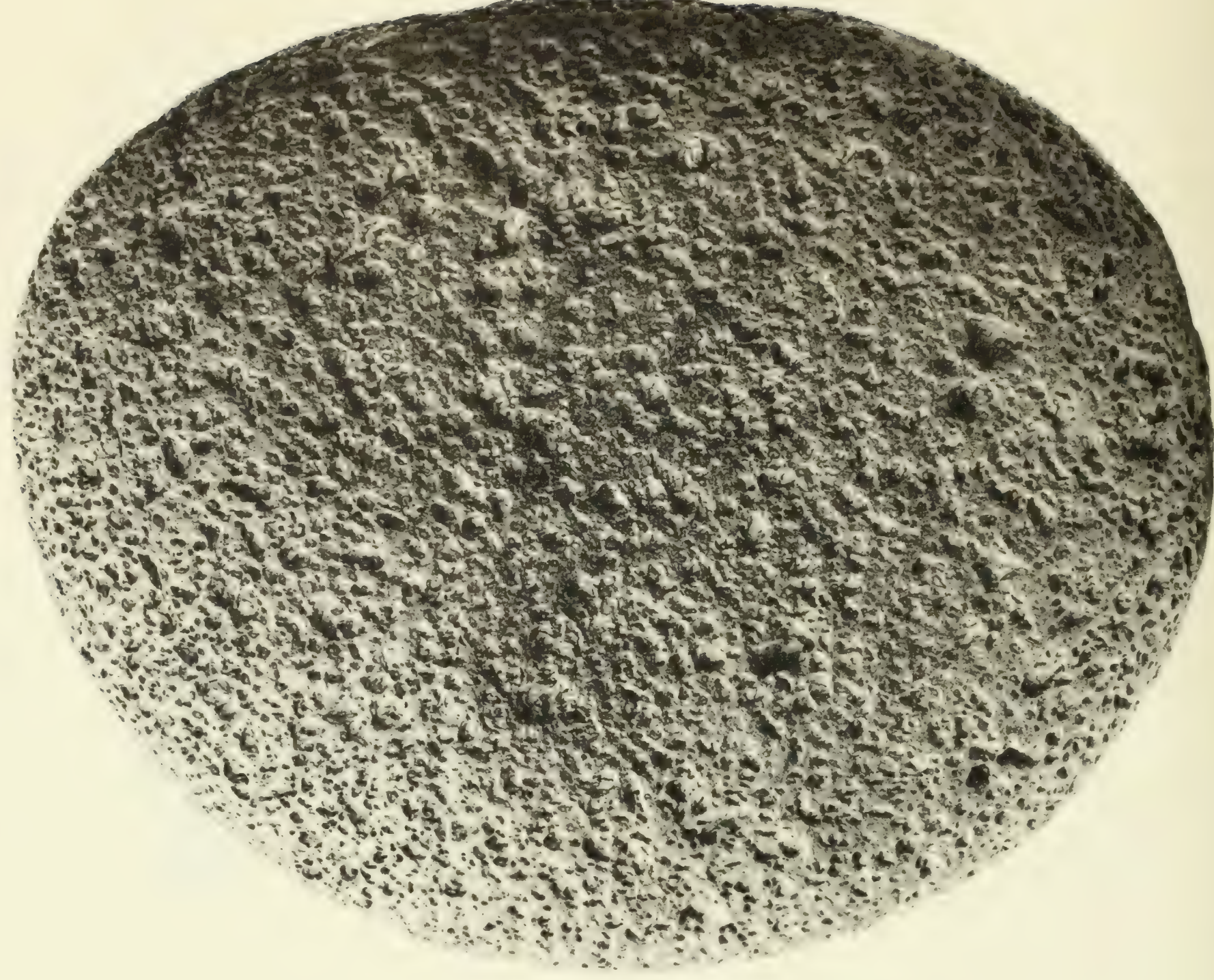
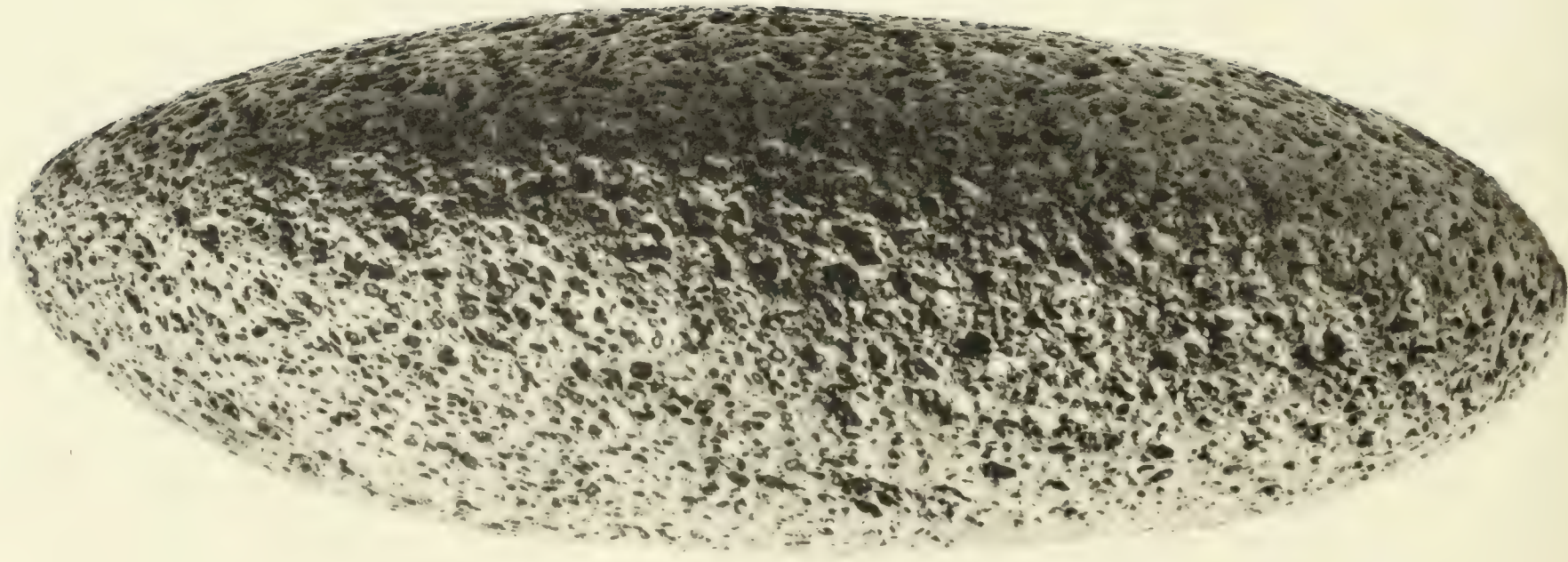
FIG. 37—Seri arrowpoints.

nearly half of them were tipped with hoop-iron, as illustrated in plate xxx, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrowpoint he was taken aback, and was unable to answer until after lengthy

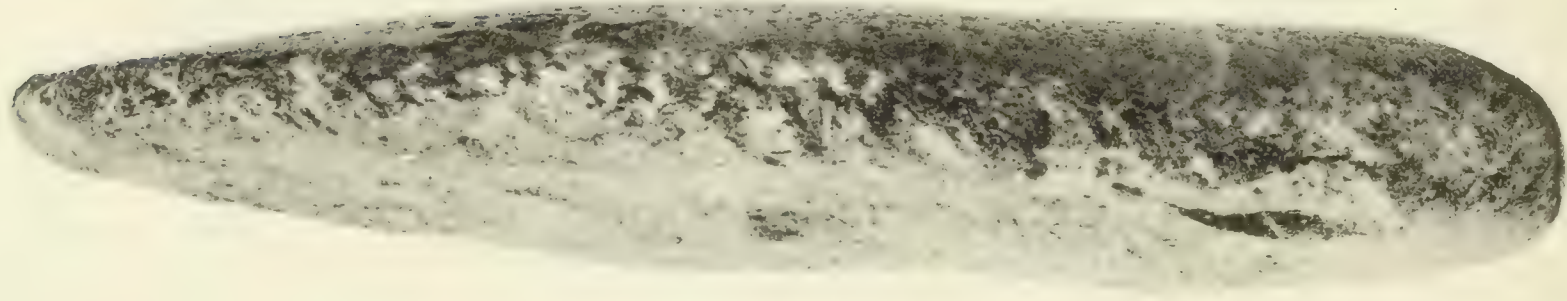
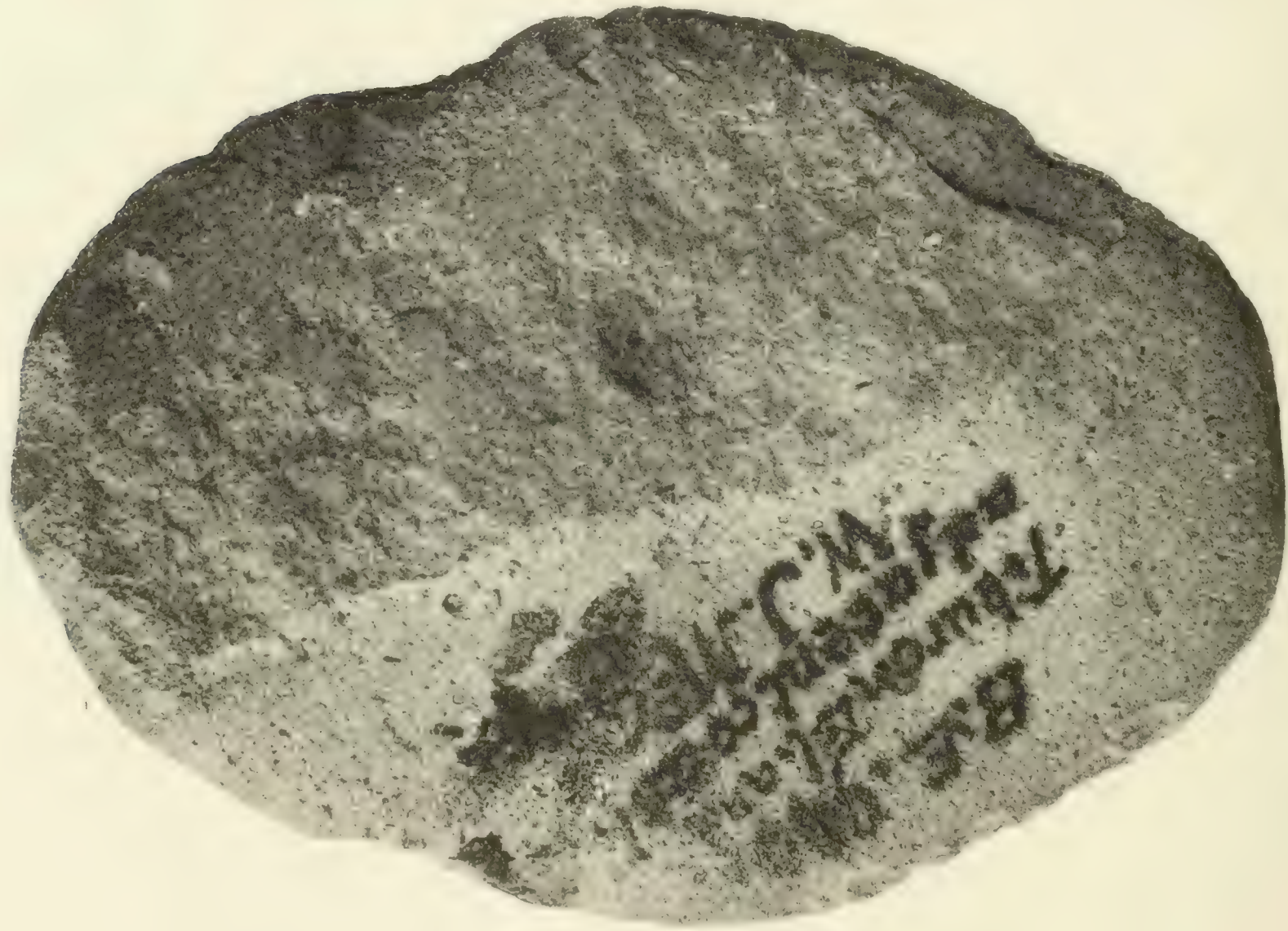
conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ahk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

The 1895 expedition was slightly more successful in the search for Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an *ahst*, several shells

¹The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows; but whether they are poisoned, I do not know." *Travels*, p. 290.



NATURAL PEBBLE SLIGHTLY USED AS GRINDER



NATURAL PEBBLE SLIGHTLY USED AS DOMESTIC IMPLEMENT

and discarded hupfs, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 37*b* (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrowpoints of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (*ante*, page 67); yet the metal is wrought cold and only with hupf and ahst like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacuachito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after beaching, a telegraph pole crossbar which had evidently

brought in a cargo of large wire, and a piece of door-frame with heavy strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by $\frac{3}{8}$ -inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 20 or 25 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other houseless sites were noted. About these 150 jacales and sites there were, say, 50 ahsts, ranging from nearly natural boulders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahsts and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

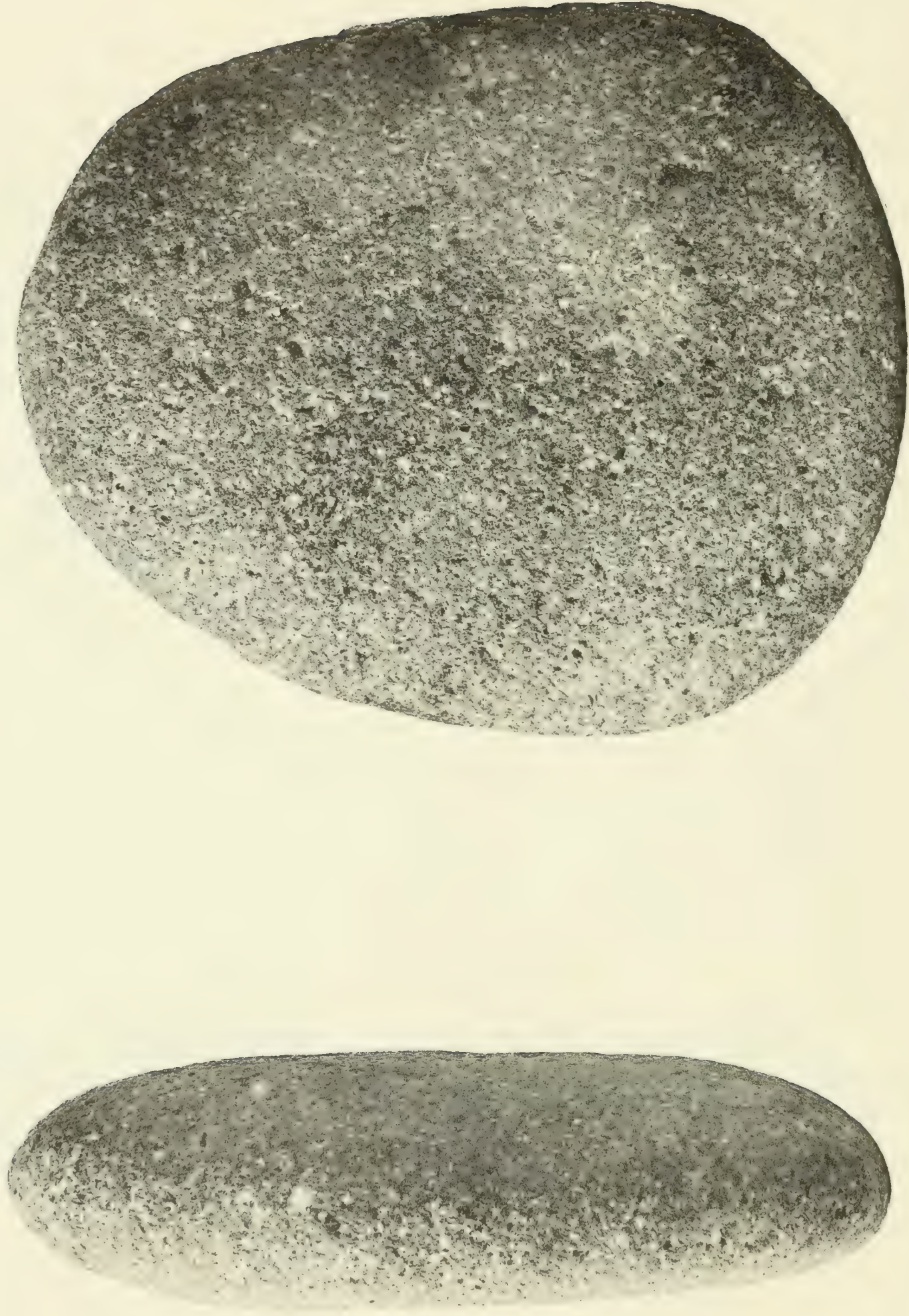
The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrowpoints there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahsts, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrowpoints, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the



NATURAL PEBBLE SLIGHTLY WORN BY USE



NATURAL PEBBLE CONSIDERABLY WORN IN USE AS GRINDER

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perservation, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetishistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

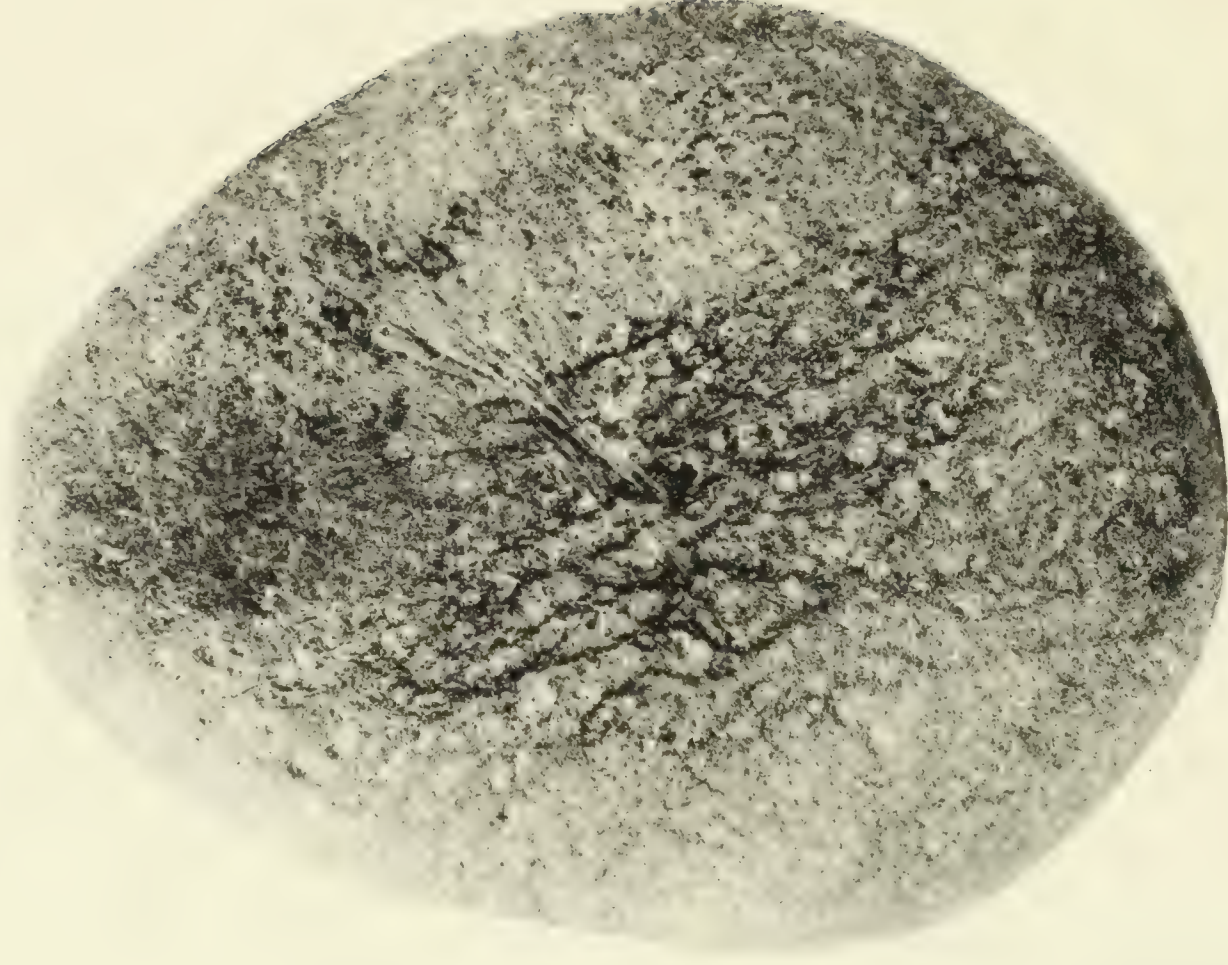
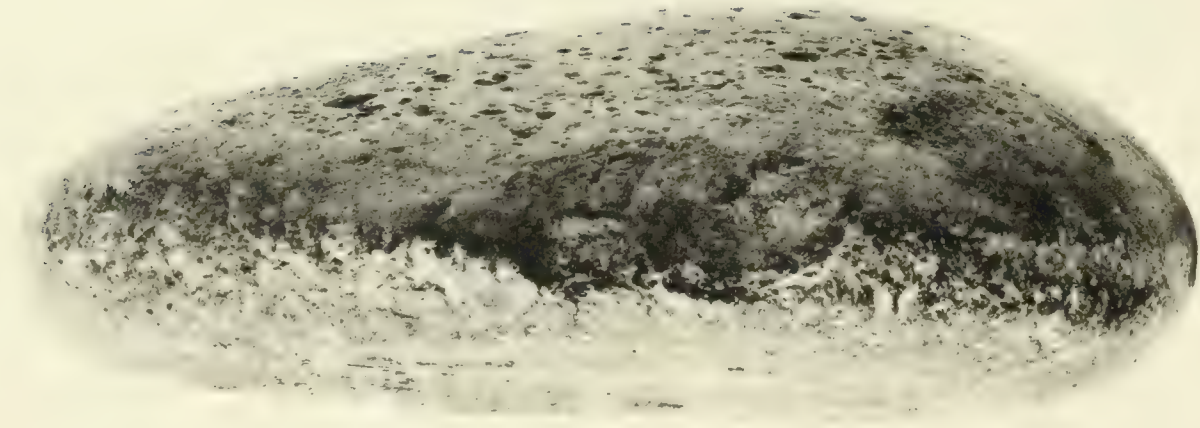
On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zootheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

been noted among many Amerind tribes. Now the essential basis of the industrial motive has been recognized by all profounder students in zootheism, animism, or hylozoism—indeed, the industrial stage is but the reflex and expression of the zootheistic or hylozoic plane in the development of philosophy; while both the devices and the cultural stage which they represent have already been outlined by the late Frank Hamilton Cushing, on the basis of surviving vestiges and prehistoric relics, and characterized as “prelithic”.¹ Cushing’s designation for the initial stage of technic has the merit of euphony, and of suggesting the serial place of the stage in industrial development; but since it denotes a most important class of artifacts only by exclusion and negation it would seem desirable to supplement it by a positive term. The class of devices (considered in both material and functional aspects) and the cultural stage in general might appropriately be styled hylozoic, though it would seem preferable to emphasize the actual objective basis of the class and stage by a specific designation—and for this purpose the term *zoomimetic* (from ζῷον, τό and μιμητικός), or its simplified equivalent, *zoomimic*, would seem acceptable.

A transitional series of devices is represented by awls of wood or iron fashioned in imitation of mandibles or claws, by wooden foreshafts shaped in symbolic mimicry of teeth, and by other vicarious replace-

¹ The Development of Form and Function in Implements; an unpublished paper presented before the British Association for the Advancement of Science at the Toronto meeting in 1897. A brief abstract, revised by the author of the paper, was printed in the American Anthropologist, vol. x, 1897, pp. 325–326; and in the absence of full authorial publication, the more strictly germane passages of the abstract are worthy of quotation: “Beginning with the semiarboreal [human] progenitor indicated jointly by projecting forward the lines of biotic development and projecting backward the lines of human development, Mr Cushing undertook to trace hypothetically, yet by constant reference to known facts, (1) the genesis of artificial devices, and (2) the concurrent differentiation of the human brain and body in the directions set forth by Sir William Turner; and he gave special force to his exposition by frequent reference to commonly neglected characteristics, physical and psychic, of young infants. He pointed out that the prototype of man, whether infantile or primitive, is a clumsy ambidexter, the differentiation of hand and brain remaining inchoate; that one of the earliest artificial processes is a sawing movement, in which, however, the object to be severed is moved over the cutting edge or surface, and that the infant or savage at first selects sharp objects (teeth, shells, etc) as cutting implements, and only after long cultivation learns to make cutting implements of stone; this early stage in development he called *prelithic*. Passing, then, to the age of stone, he showed that this substance is first in the form of natural pebbles or other pieces for hammering, crushing, bruising, and as a missile. That in time the user learns that the stone is made more effective for severing tissues by fracturing it in such way as to give a sharp edge, the fracture being originally accidental and afterward designed; yet that for a long time it is the hammerstone that is fractured and not the object against which the blows are directed. In this stage of development (called *protolithic*, after McGee) stone implements come into more or less extended use in connection with implements of shell, tooth, etc; yet the implements are obtained by choice among natural pieces and by undesigned improvement of these through use. The next stage is that of designed shaping through fracture by blows from a hammerstone, followed by intentional chipping. This may be regarded as the beginning of paleolithic art, and also marks the beginning of dexterity and the activital differentiation of the hands. Incidentally the author brought out the importance of that concept of mysticism which is found of so great potency among infantile and primitive minds, in such manner as to suggest the genesis, and the obscure reasons for the persistence of this phase of intellectuality; for the inchoate imagination is able to expand only in the direction of mystical explanation, so that fertility in primitive invention seems to be dependent on appeal to the mysterious powers of nature. At first the mystery pervades all things, but in time it is largely concentrated in animate things; then animate powers are imputed, *e.g.*, to physical phenomena. So to the infant or race-child fire is a mystical animal or demon which, in prelithic or protolithic times, must have been at first tolerated, then fed with fuel and punished with water and eventually subjugated and tamed, much as the real animals were afterward brought into domestication.”



NATURAL PEBBLE CONSIDERABLY WORN AS CUTTER AND GRINDER

ments of material in devices of zoomimic motive; but this series may be regarded as constituting a subclass, or as a connecting link between classes rather than a major class of devices. Yet the subclass is of great significance as a mile-mark of progress in nature-conquest, and as the germ of that industrial revolution consummated as tribesmen grew into reliance on their own acumen and strength and skill rather than on the capricious favor of beast-gods.

The next major class of devices comprises shells and cobbles and bowlders picked up at random to meet emergency needs, wielded in ways determined by emergency adjustment of means to ends, and sometimes retained and reused under the budding instinct of fitness, though never shaped by design. The devices of this class are best exemplified by the tool-shells and by the hupfs and ahsts of the Seri matrons, partly because of the practical absence of higher artifacts from their territory; yet the class is by no means confined to this notably primitive folk: the greater part of the implements used by the California Indians and a large part of those used by every other known Amerind tribe in aboriginal condition consist of shore cobbles, river pebbles, talus bowlders, or other natural stones of form and size convenient for emergency use; and (despite the fact that such objects are often ignored by observers, for the prosaic reason that they represent no familiar or trenchant class), there is no lack of evidence that they are or have been in habitual use among all primitive peoples. Although zootheistic or sortilegic motives doubtless play an undetermined rôle in the selection of the objects, and although wonted zoomimic movements doubtless affect the initial processes, the essential distinction from zoomimic artifacts resides in the selection and use of natural objects through a mechanical chance tending to inspire volitional exercise rather than through a fiducial rule tending to paralyze volitional effort; while the class is no less trenchantly separable from those of higher grade by the absence of preconceived models or technical designs. The class of devices and the culture-stage which they represent have already been outlined and defined as *protolithic*.¹

A transitional series of devices allied to the Seri hupf on the one hand and to the chipped artifact on the other hand is frequently found among the aborigines of California and other native tribes; it is typified by a cobble or other natural piece of stone cleft (first by accident of use and later by design) in such wise as to afford an edged tool. This subclass of artifacts is religiously eschewed by the Seri; but it is of much interest as an illustration of the way in which artificialization proceeds, and of the exceeding slowness of primitive progress.

The third great class of devices defined by technologic development comprises stones chipped, flaked, battered, ground, or otherwise wrought in accordance with preconceived designs, together with cold-forged native metal, horn, bone, wood, and other substances wrought

¹American Anthropologist, vol. IX, 1896, pp. 317-318.

in accordance with preconceived models and direct motives. Among the Seri this class of devices is represented only by the rare arrowpoints of chipped stone, which seem to be accultural and largely fetishistic; but the class is abundantly represented by the artifacts of most of the Amerind tribes. The class and the cultural stage have already been outlined under the term *technolithic*.¹

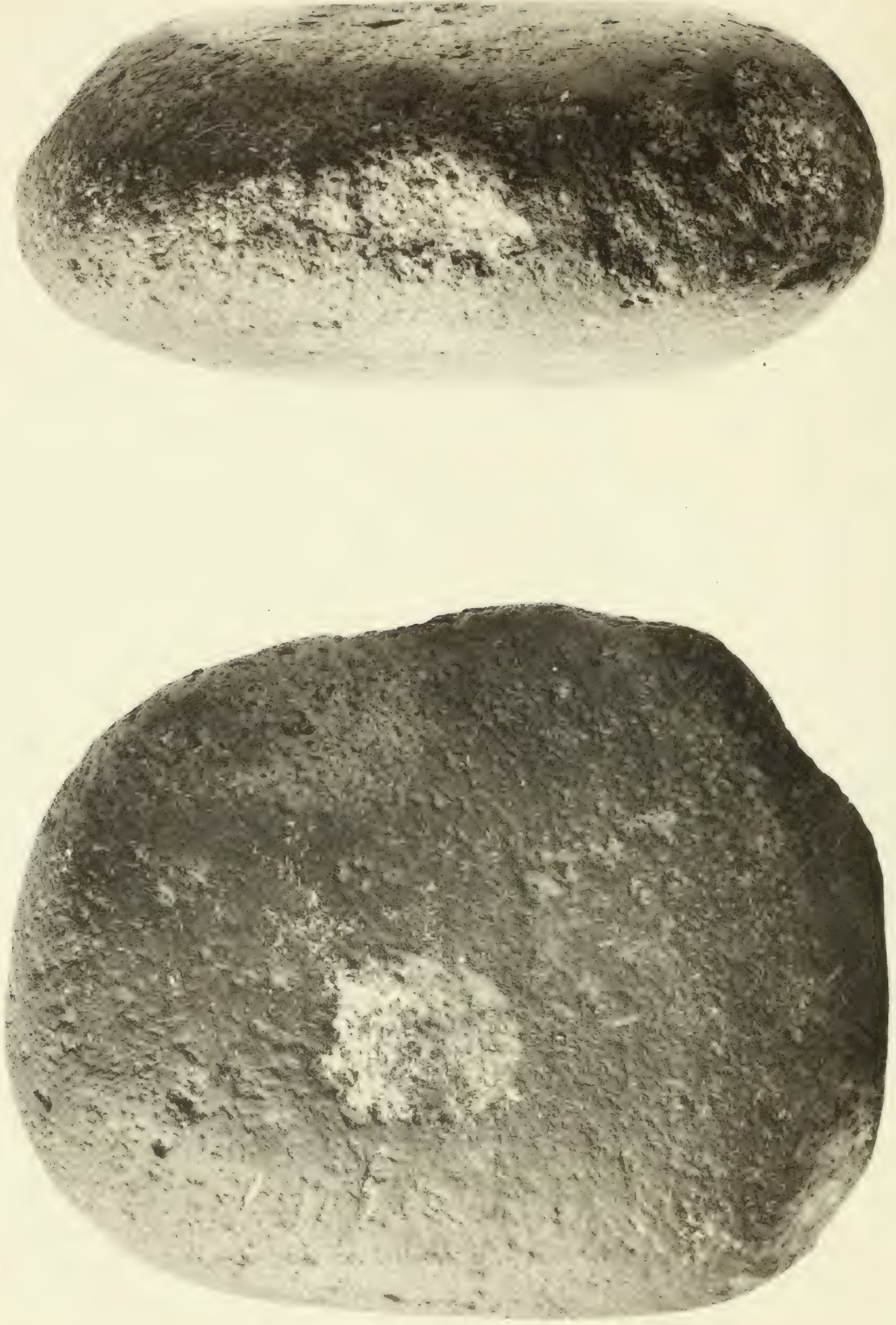
A transitional series of devices intervenes between stone artifacts and artifacts of smelted metal; it is represented by malleable native metals (chiefly copper, silver, meteoric iron, and gold), originally wrought cold, after the manner of stone, though heating under the hammer in such wise as to prepare the way for forging, fusing, and founding. These devices and the processes with which they are correlated are not represented among the Seri; indeed, the crude use of iron by the tribe would seem to lie on a lower plane in industrial development than even the arrowpoint-chipping, in that the artifacts, though of foreign material, are wrought largely in accordance with zoomimic motives.

The fourth major class of devices, comprising the multifarious artifacts of smelted and alloyed metal, was barely represented in aboriginal America; only a few of the more advanced tribes had attained the threshold of metallurgy, and even among these the crude metal working remained hieratic or esthetic, and did not displace the prevalent stone craft.

Briefly, the several stages in the development of tools and implements may be seriated as follows:

Stages	Typical materials	Typical products	Essential ideas
1. Zoomimic	Bestial organs	Awls, spears, harpoons, arrows.	Zootheistic faith.
A. Transitional	Symbolized organs	Piercing and tearing implements.	Faith + craft.
2. Protolithic	Natural stones	Hammers and grinders—h u p f s and ahsts.	Mechanical chance.
B. Transitional	Cleft stones	Grinders and cutters	Chance + craft.

¹ Annual Report of the Smithsonian Institution for 1898, pp. 42-43. The long extant and well-known classification of stone artifacts as "paleolithic" and "neolithic" may not be overlooked. This classification was based originally on prehistoric relics of Europe, and it served excellent purpose in distinguishing finely finished stone implements from those of rudely chipped stone; but both classes of artifacts were shaped in accordance with preconceived design, and hence both belong to the technolithic class as herein defined. It may be added that the classification was made with little if any reference to primitive thought, was not based on observation among primitive peoples, and has not been found to apply usefully to the aborigines and aboriginal artifacts of America, where the representative tribe or prehistoric village site is characterized by implements of both "paleolithic" and "neolithic" types which intergrade in such manner as to prove contemporaneous manufacture and interchangeable use; while the preponderance of polished-stone implements is generally indicative of simpler rather than of more advanced culture.



NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (TOP AND EDGE)

THE HELIOTYPE PRINTING CO., BOSTON



NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (BOTTOM AND EDGE)

Stages	Typical materials	Typical products	Essential ideas
3. Technolithic	Artificialized stones.	Chipped, battered, and polished implements.	Designed shapement by molar action.
C. Transitional	Malleable native metals.	Copper celts, gold ornaments, etc.	Designed shapement by molar action + chance heating.
4. Metal	Smelted ores	Steel tools, etc.....	Shapement by molar and molecular action.

It is to be realized that the successive stages represent characteristic phases of normal and continuous growth, and hence that their relations are intimate and complex. The fundamental factor of the growth is intellectual advancement, and hence in actual life each stage is at once the germ and the foundation for the next higher; each stage is characterized by a type or a cognate series of types, yet each commonly con-

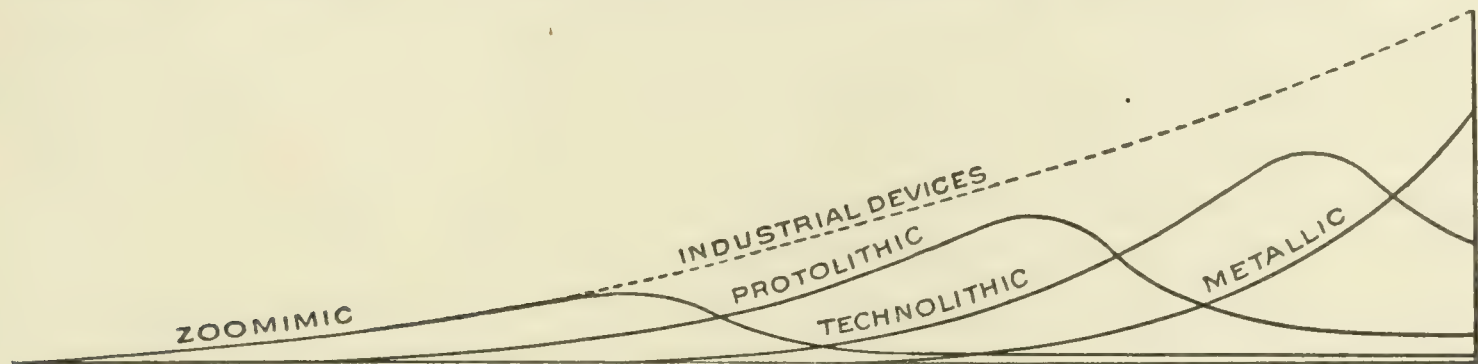


FIG. 38—Diagrammatic outline of industrial development.

tains a few forms prophetic of the next stage and many forms vestigial of the earlier stages; so that the stages are to be likened unto successive generations of organisms, or (still more appropriately) to the successive phases of ovum, larva, pupa, and imago in the ontogeny of the insect rather than to the arbitrary classes of pigeonhole arrangements. The complex relations conceived to exist among the stages can be indicated more clearly by diagraphic representation than by typographic arrangement, and such a representation is introduced as figure 38. The successive curves in the diagram express the rhythmic character of progress and the cumulative value of its interrelated factors, as well as the dominance of successive types until gradually sapped and absorbed (though not immediately or completely annihilated) by higher types reflecting a strengthened mentality.

The place of the normal pacific industries of the Seri in this genetic classification of human technic is definite. The Seri craft combines the features of the zoomimic and protolithic stages more completely than that of any other known folk, and in such wise as to reveal the relations

between these stages and that next higher in the series with unparalleled clearness; their craft also displays an aberrant (and hence presumptively accultural) feature pertaining to the technolithic stage; and in so far as their craftsmen use the material typical of the age of metal they degrade it to the transitional substage between dominant zoomimicry and designless stone-using.

Viewed in the general light of their pacific industries, the Seri are, accordingly, among the most primitive of known tribes; their technic is in harmony with their esthetic, and also with their somatic and tribal characteristics, in attesting a lowly plane of development; while their industries, like their other demotic features, are essentially autochthonous.

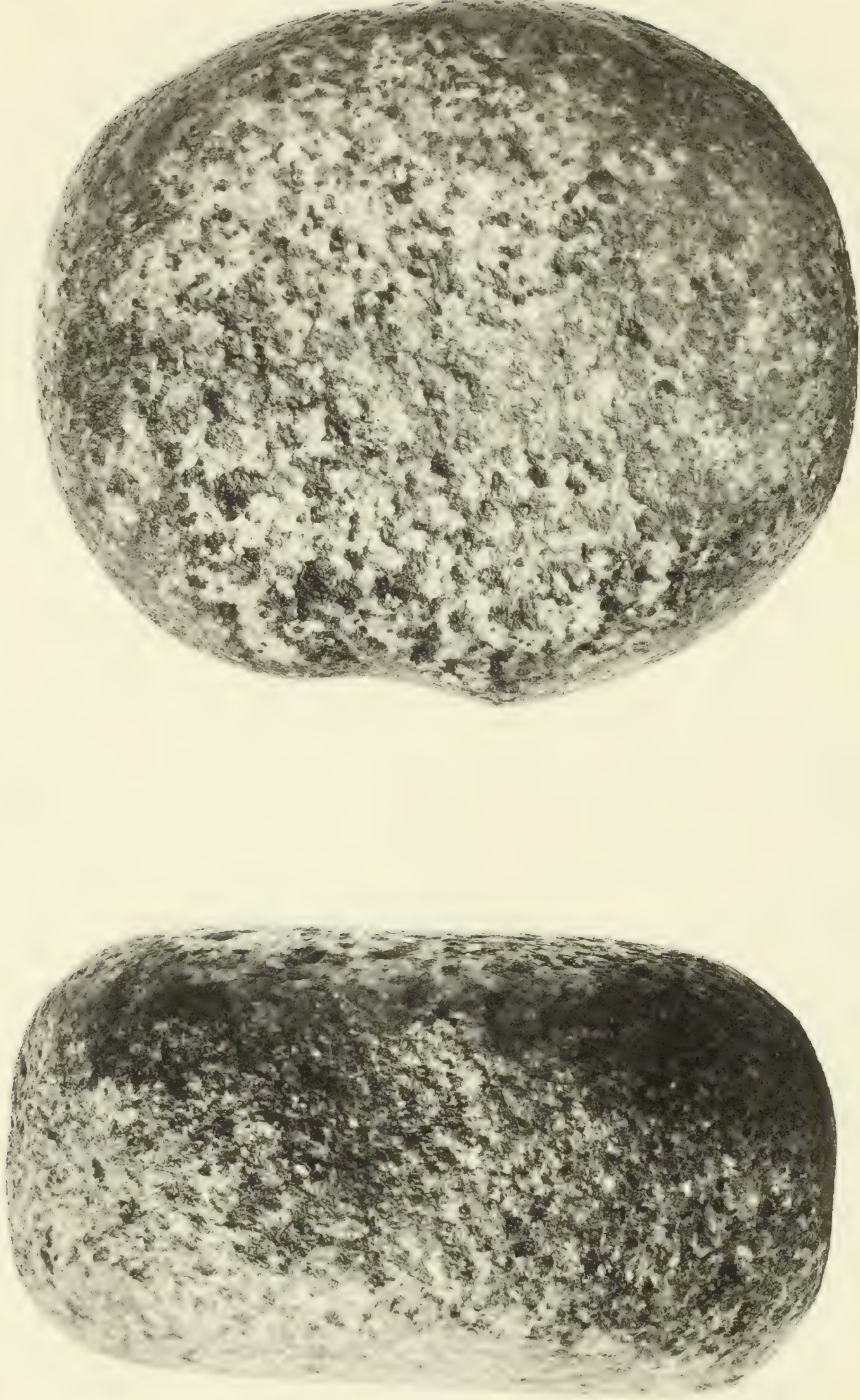
WARFARE

Something is known of Seri warfare through the history of the centuries since 1540, and especially through the bloody episodes of the Encinas régime and the occasional outbreaks of the last decade or two. The available data clearly indicate that the warfare of the tribe complements their pacific industries in every essential respect.

As befits their primitive character, warfare has played an important rôle in the history of the folk, forming, indeed, one of the chief factors in determining the course of tribal development. There is no means of estimating the losses suffered and occasioned in warfare with the neighboring tribes during either prehistoric or historic times; but the indications are that they were much greater than the losses connected with Caucasian contact. Neither is it practicable to estimate reliably the fatalities attending the interminable conflicts with the Spanish invaders and their descendants, though it is safe to say that the Seri losses in strife against Spaniards and Mexicans aggregate many hundred, and that the correlative loss on the part of their enemies reaches several score, if not some hundred, lives. Few if any other aboriginal tribes of America have had so sanguinary a history as the Seri, and none other has at once so long and so bloody a record.

According to the consistent accounts of several survivors of conflict with the Seri, their chief weapons are arrows, stones, and clubs—though several survivors manifest greater fear of the throttling hands and rending teeth of the savage warriors than of all their artificial weapons combined. A striking feature of the recitals, indeed, is the rarity of reference to weapons; the ambushes or surrounds or chance meetings, with their disastrous or happy consequences, are commonly described with considerable detail; the carbines or rifles, the machetes and knives, or the deftly thrown riatas employed by the rancheros or vaqueros are mentioned with full appreciation of their serviceability; but the ordinary expressions concerning the despised yet dreaded Seri are precisely those employed in recounting conflicts with carnivorous beasts. When Andrés Noriega's kinswoman proudly related how he





IMPLEMENT SHAPED BY USE

alone once overawed and routed an attacking party of 30 Seri warriors, she duly mentioned the carbine ready for use in his hands and the six-shooter and machete in his belt; but nothing was said of the Seri weapons. When a distinguished sportsman citizen of Caborca, the local authority on the Seri, sought to dissuade the 1895 expedition from visiting Tiburon, he was repetitively and cumulatively emphatic in his oracular forecast, "*Ils vont vous tuer! Ils vont vous tuer!! ILS VONT VOUSTUER!!!*"—yet he made but passing reference to "poisoned" arrows, and none to other weapons, in the general implication that invaders of the tribal territory were torn limb from limb and strewn over the rocks and deserts of Seriland. When Jesus Omada, of Bacuachito, boasted his Seri scars, he indeed emphasized the arrow-mark on his breast, but only as a prelude and foil to the far ghastlier record of his teeth-torn arm. When Robinson and his companion were butchered on Tiburon in 1894, the bloody work was effected chiefly by means of a borrowed Winchester; and neither the account of the survivors nor that of the actors made mention of native weapons—save the stones with which the second victim was finished according to the local version. In short, most of the casual expressions and fuller recitals alike indicate that while the Seri are famous fighters their weapons—except the much-dreaded "poisoned" arrows—are incidents rather than essentials to savage assaults, and that their prowess rests primarily on bodily strength and swiftness.

The stones used in battle, as described by the survivors and as intimated by Mashém, are cobbles as large as a fist, i. e., hupfs of typical form and size. So far as is known they are never hurled, slung, nor projected in any other manner, nor are they hafted or attached to cords after widespread aboriginal customs; they are merely held in the hand, as in the slaughter of quarry. Hardy made note of a war-club—"They use likewise a sort of wooden mallet called Macána, for close quarters in war";¹ but nothing of the kind was found at Costa Rica in 1894, and no woodwork suggesting such use was found in the depths of Seriland in 1895.

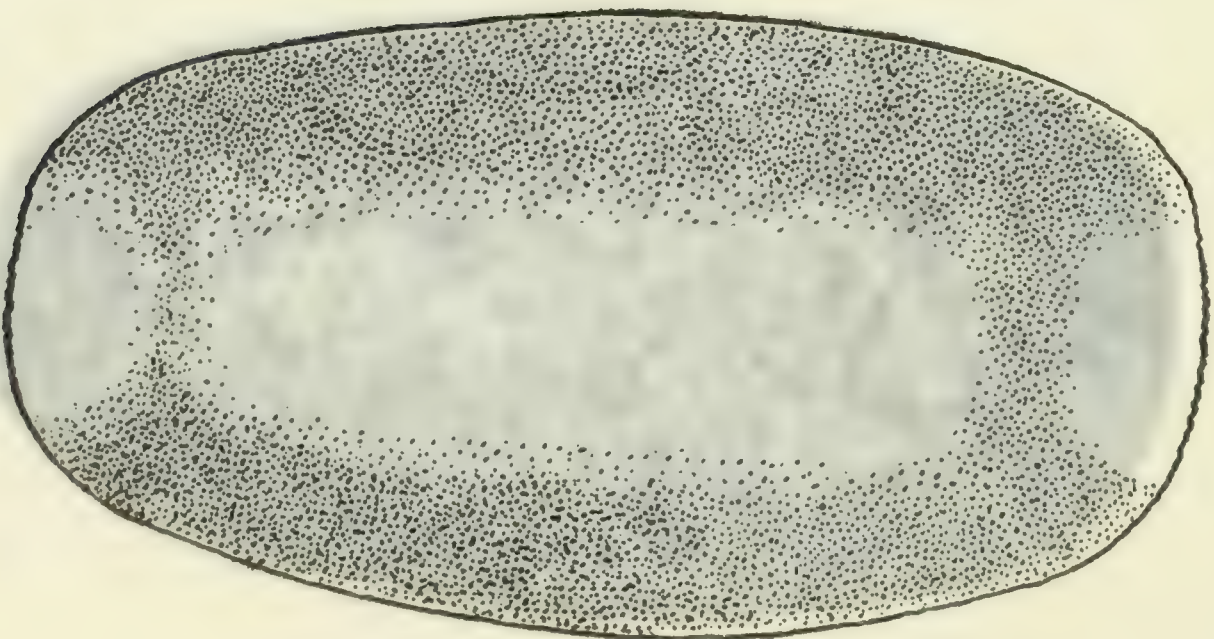
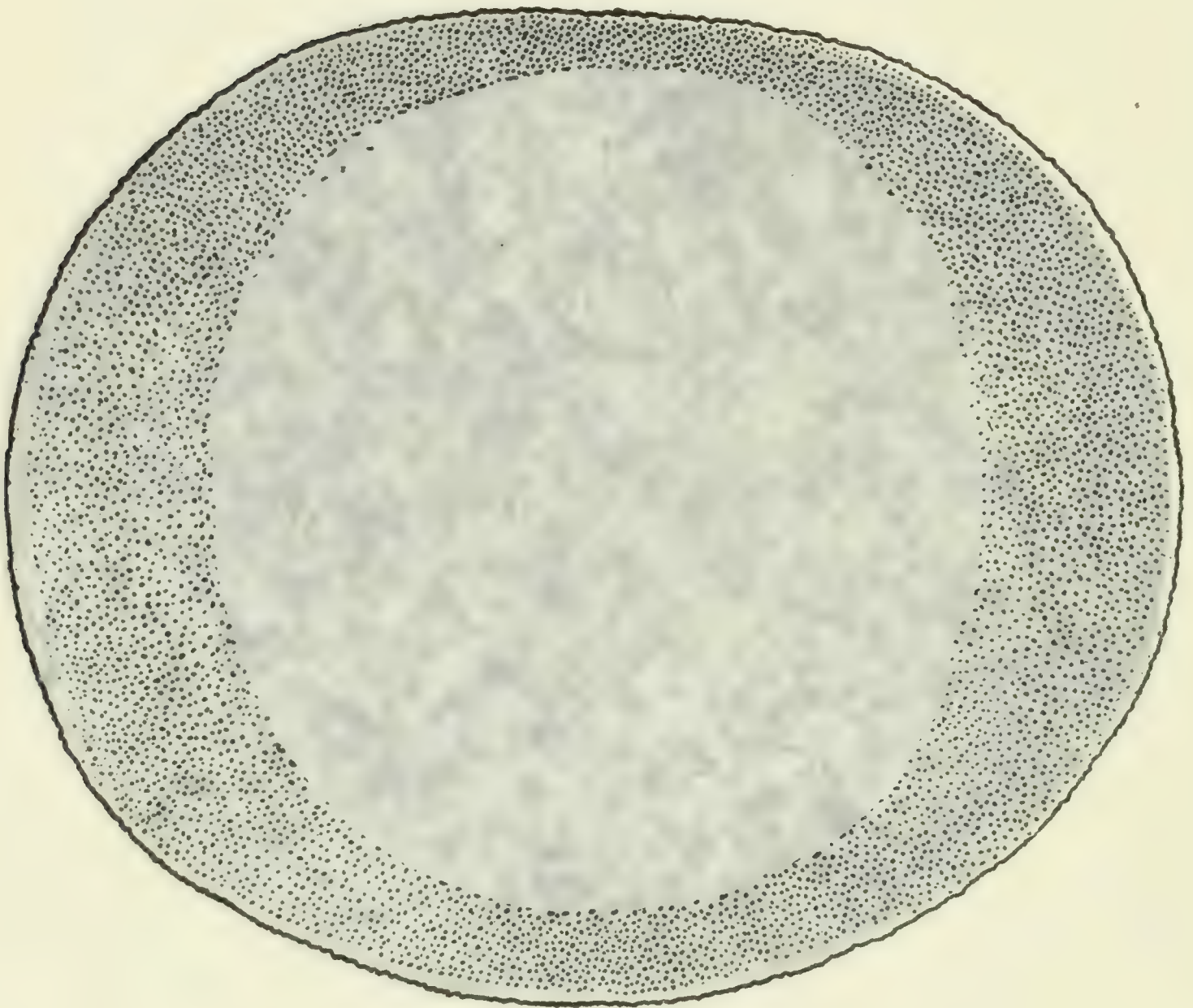
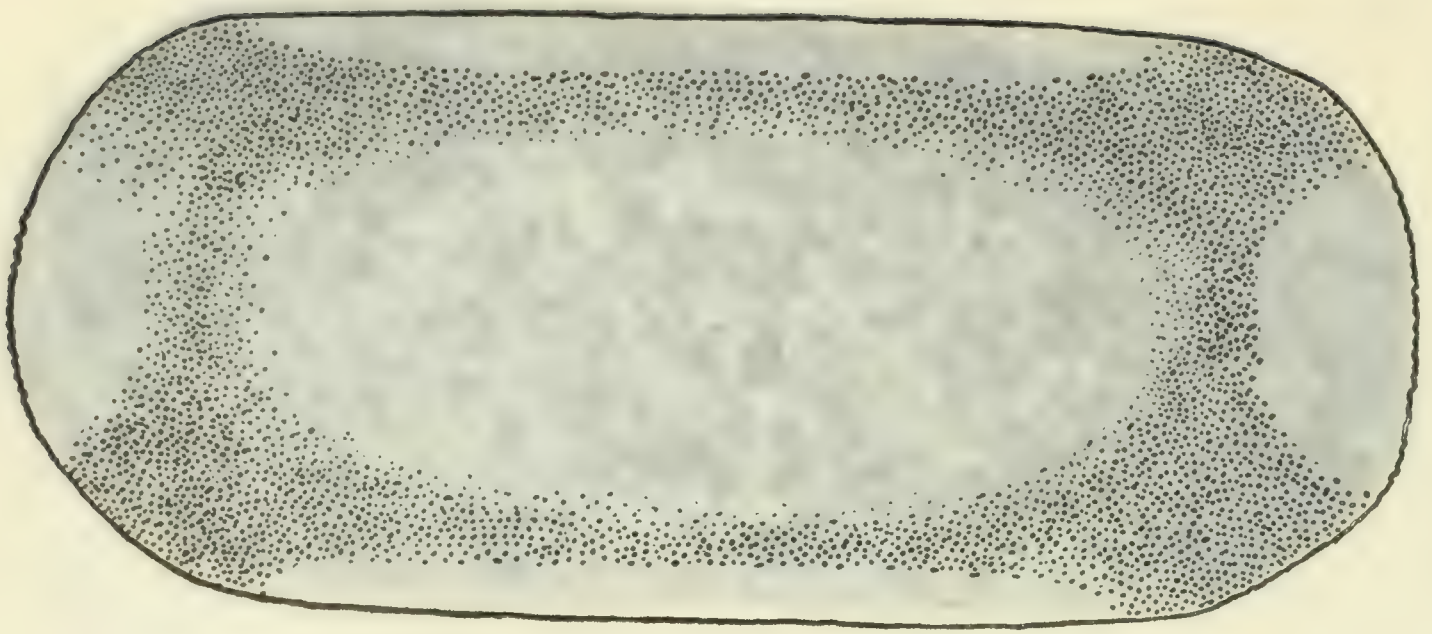
The most conspicuous and doubtless the most effective war weapon is the arrow projected from the bow in the unusual if not unique fashion already noted (ante, p. 201). There is nothing to indicate that the Seri are especially effective archers; the facts (1) that a large part of the arrows are pointless, save for the hard-wood foreshafts; (2) that stone arrowpoints are not habitually used; and (3) that comparatively slight reference is made to the use of arrows in records and recitals of Seri battles, tend on the contrary to indicate inferior ability in archery. And in the course of the explorations by the 1895 expedition it was noted that the feral fowls and animals of Seriland—pelican, gull, snipe, curlew, cormorant, coyote, hare, bura, mountain sheep, peccary, etc—displayed little fear of human figures at distances exceeding 75 yards,

¹ Travels, p. 290.

and seldom stirred until the stranger approached within 50 or 60 yards; whence it may be assumed that these distances fairly indicate the ordinary range of Seri arrows. The few accounts of conflicts in which arrows are mentioned prove, however, that those missiles are discharged with great rapidity and in considerable numbers during the brief interval to which the fighting is customarily limited.

The most notorious feature of the Seri warfare, and that of deepest interest to students, is the reputed use of poisoned arrows. The scattered literature of the tribe, from the days of Coronado onward, abounds in references to this custom; the Jesuit authorities give somewhat varied yet fairly consistent descriptions of the preparation and the effects of these arrows; Hardy added his testimony as to the character of the poison; General Stone gave directly corroborative evidence; hacendero Encinas gives witness to the effects of the envenomed missiles on his own stock; while Mashém recounted to the 1894 expedition the various uses of the "poisoned" arrows and highly extolled their potency, though he was noncommittal—save in casual allusions—as to the details of the poisoning. A part of the arrows acquired by this expedition and now preserved in the National Museum were professedly poisoned; they are easily distinguished by a thin varnish of gummy and greasy substance over the iron tips and wooden foreshafts, and especially about the attachments of mesquite gum and sinew. According to Mashém's asseverations, such arrows are habitually used in war save when the supply is exhausted by continued demand; they are also used occasionally in hunting, especially for deer and lions (i. e., the swiftest and fiercest game of the region); and the use of the poisoned missile does not destroy the meat of the animal, though the portion immediately about the wound is "thrown away". Two of the treated arrows brought back from Costa Rica were submitted to Dr S. Weir Mitchell some months afterward for examination, and for identification of any poisonous matter found on them; but no poison was detected. On the whole, the data concerning the reputed arrow poisoning are less definite than might be desired; yet they are sufficient to suggest the nature of the custom with considerable clearness.

In any consideration of Seri customs it is to be realized that the folk are notably primitive in thought, and hence deeply steeped in that overweening mysticism which dominates all lowly folk—that they still cling to zoomimic motives in their simple handicraft, and are still wholly within zootheism in their lowly faith. In the light of this realization the numerous consistent records of the preparation of the poison are easily interpreted, and are found to be fully in accord with the prevailing motives of the tribe; and the interpretation serves to explain the somewhat discrepant accounts of the effects of the poison, effects ranging from nil to horrible sepsis. According to the more circumstantial recipes, the first constituent of the poison is a portion of lung, preferably human—a selection readily explained by pristine philosophy,



in which the breath is life, and the lungs at once the seat and the symbol of vitality. Naturally the fleshly symbol is from a dead body; and just as the lung denotes vitality in life, so (in primitive thought) it denotes an emphasized, as it were an incarnated, antithesis of vitality in death. Next, as the recipes continue, this death-symbol is exposed to the most potent agencies of death—to the bites of maddened rattlesnakes, to the stings of irritated scorpions, to the venomous trailings of harried centipedes. Then the deadly creatures are themselves killed, and the fanged heads of the serpents, the stinging tails of the scorpions, and the fiery feet of the centipedes, together with portions of redolent ordure from the grave-cairns, and other symbols of death and decay are crushed and macerated with the mass in a wizard's brew, growsome beyond the emasculated and degraded witch's broth of medieval times. Finally, the grisly mess is allowed to simmer in a stinkpot¹ shell under the fierce desert sun until its ripeness and putrid potency are attested by the rank feter of death; when it is ready for its ruthless use. Thus the entire recipe is thaumaturgic in concept, necromantic in detail; it represents merely the malevolent machinations of the medicine man seeking success by spells and enchantments; it stands for no rational system of thought or practice, but pertains wholly to the plane of shamanism and sorcery. So interpreted the recipe is readily understood; the several witnesses who have independently obtained it are justified, and Mashém's details and unwilling intimations are made clear—especially if the sacrificed flesh about the wound in deer or lion be deemed an oblation, such as primitive folk are given to making.

While thus the motive of the medicine-man in compounding his loathsome mess is wholly necromantic, serious consequences of its use must occasionally supervene; and though these may be incidental so far as the philosophy is concerned, they may tend reflexly toward the perpetuation of the custom. In the course of the preparation of the charm-poison, and especially in the final ripening process, morbid germs and ptomaines must be developed; these may retain their virulence up to the time of use, particularly when a batch of poison is prepared for a special occasion and the arrows are used while the application is still fresh; and in such cases the wound might initiate septicemia of the sort described in Castañeda's early narrative and still more clearly displayed by Señor Encinas' saddle-horse (ante, p. 112). Naturally the incidentally zymotic varnish frequently fails of effect, and can hardly be expected to remain morbid long enough to be detected in laboratory experiments; yet it is probable, as attested by Mashém's guarded expressions, that the occasionally terrible results of such poisoning are within the ken of the Seri shamans.

It is noteworthy that the various early accounts of the Seri arrow-poisoning are strikingly consistent, though sufficiently diverse to

¹ *Cinosternum sonorensis* (?).

attest independence in origin; it is also noteworthy that several of the accounts are given hesitatingly and half qualifiedly, with alternative references (obviously hypothetical) to vegetal sources of poison. Thus the author of "Rudo Ensayo" qualified a characteristic (though brief) account of the preparation of the poison by adding: "But this is mere guesswork, and no doubt the main ingredient is some root."¹ So, too, Hardy described the compounding of the brew in much detail, adding the significant statement that "when the whole mass is in a high state of corruption the old women take the arrows and pass their points through it"; yet he could not resist the alternative hypothesis, and added: "Others again say that the poison is obtained from the juice of the yerba de la flecha (arrow-wort)."² Bartlett "was told that the Ceris tip their arrows with poison; but how it was effected I [he] could not learn," and so he contented himself with quoting Hardy's account.³ Stone gave the recipe in fairly similar terms, adding that the morbid mass is hung up "to putrefy in a bag, and in the drippings of this bag they soak their arrowheads"; and he gave a characteristic account of the effect of a wound from a poisoned arrow on a human subject (ante, p. 100). Pajeken independently attested the virulence of the poison, and described the consequences of a slight wound suffered by his horse (ante, p. 101), while Pimentel gave independent corroboration, and Orozco y Berra added the further information that the proverbially deadly poison is fortified "by superstitious practices" (ante, p. 103). Bancroft gave currency to the customary recipe, and also to the complementary hypothesis that the "magot" may be the source of the poison; while Dewey merely mentioned the reputed use of poisoned arrows. Like their predecessors, the vaqueros of today are familiar with the tradition of a necromantic brew; but many of them—like Don Jesus Omada, of Bacuachito, and Don Ramon Noriega, of Pozo Noriega—display a much more lively interest in the local yerba mala, or yerba de flecha, of which they stand in such mortal dread that they can hardly be induced to approach a clump of it, and which they conceive must add the final crux to the brew. This plant was described in "Rudo Ensayo": "Mago, in the Opata language, is a small tree, very green, luxuriant, and beautiful to the eye; but it contains a deadly juice which flows upon making a slight incision in the bark. The natives rub their arrows with it, and for this reason they call it arrow-grass; but at present they use very little."⁴ Elsewhere the anonymous author mentions the use of (presumably) this poison by the Jova, and describes it as "so deadly that it kills not only the wounded person, but also him who undertakes the cure by sucking the wound, as is customary with all the Indians"; the description implying that the infection is irremediable.⁵ Yet he apparently discriminated this poison from that of the Seri, for which another plant known as caramatraca

¹ Op. cit., p. 198; cf. ante, p. 78.

² Travels, p. 299; cf. ante, p. 87.

³ Personal Narrative, p. 465.

⁴ Op. cit., p. 161.

⁵ Op. cit., pp. 187, 188.



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is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiano bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.¹

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.² So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

¹ It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papagueria yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by tabu in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 35).

² These motives on the part of the Seri were reciprocated by their tribal enemies; a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a superannuated Papago "doctor" as a badge of invulnerability to similar missiles, was cautiously shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

included a heavy Springfield "remodeled" rifle, lacking not only ammunition but breechblock and firing pin; while Don Andrés Noriega, of Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.¹ The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,² to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

The mystical potency ascribed to Caucasian firearms and cutlery by the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

¹ The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc., were kept by means of tokens stamped from sheet brass. While a Seri rancharia was maintained near the rancho, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancharia.

² *American Anthropologist*, vol. XI. August, 1898, pp. 243-249.

the crudeness of the work, strongly supports the inference that the stone arrow-making of the Seri was originally a fetishistic mimicry of alien devices—a plane, indeed, above which the craft has hardly risen even in recent decades.

While the Seri are devoid of military tactics in the strict sense of the term, they have certain customs of warfare which seem to be scrupulously observed. These customs are closely akin to those followed in hunting the larger land animals—indeed, the warfare of the tribe is merely an intensified counterpart of their chase.

The favorite tactical device of the warriors, as indicated by the great majority of their battles, is the ambuscade, laid and sprung either with or without the aid of decoys (usually aged women). Sometimes a considerable body act in concert under a prearranged plan; more commonly a few warriors only are involved at the outset, though these may be joined as the crisis approaches by companions lurking behind rocks and shrubs to be either on hand at the finish or in the way of ready flight, according to the turn of the battle-tide; and it is probable that the greater part of the ambuscades prove stillborn by reason of the oozing courage of leaders and the shirking of their supporters if the prospective victims present a bold front, or if the final omens are otherwise adverse. The ambuscade, with its flying contingent, grades into the device of stalking a stationary or slowly moving enemy, the stealthy approach terminating either in covert attack at close range or in sudden rush by a superior force. The theory, or rather the instinctive plan, of the campaign is to seek advantage in both position and numbers, to keep under cover until the instant of attack, to have sure and ample lines of retreat, and in every way to minimize individual risk.

There is a widespread notion toward the Seri frontier that the savages are given to sorties and surprises by night; but both specific testimony and the records indicate, when carefully analyzed, that this tactical device is much less common in practice than in repute, and is not, indeed, characteristic of the tribe. A few known battles began in attacks by night; but the war parties, like the hunting and fishing parties (save in the semiceremonial pelican pilgrimages), display decided preference for daylight in their forays—indeed, there are various indications that the folk are much more timid and oppressed with superstitious fears by night than by day.

In rare cases small parties of aliens have been half openly surrounded and done to death by considerably larger parties of the savage folk; but this method, too, is incongruous with the fixed habits of the tribe and with the deep-planted instinct of avoiding personal exposure.

A considerable number of the long list of homicides charged against the Seri, and marking the beginning of many of their battles, were individual rather than collective, the consummation of inimical impulse sometimes treacherously concealed for favorable opportunity, as in the

pitiful case of Fray Crisóstomo Gil, and other times rising explosively beyond the feeble control of the untrained mind; for the impulse of enmity toward aliens is an ever-present possession—or obsession—of the tribe, and a reflection of that race-sense which is their most distinctive attribute.

Of open warfare and face-to-face fighting there is hardly a germ among the Seri. When themselves ambushed or surrounded, some of their stouter warriors have in a few instances faced the foe for a few minutes at a time, as is shown by the annals of Cerro Prieto; yet this accidental attitude but betokens the play of chance rather than the plan of choice. Concordantly, the folk avoid the method of warfare (so common among other Amerind tribes as to be properly considered characteristic) involving open duel between chiefs and other warriors; they seem to be devoid of that sense of fairness in fighting which finds expression in the duel; and despite the individual advantages growing out of gigantic stature, immense strength, and superior swiftness, they habitually seek to combine in numbers against panicked or baffled enemies, just as their hunters throw themselves mercilessly on surrounded quarry. Of open boldness or confident prowess no trace appears; and the body of facts seems to justify the prevailing Sonoran opinion that the warfare of the Seri is treacherous and cowardly in design, craven and cruel in execution.

Once begun, the conduct of the fray by the Seri fighters is fairly uniform; the warriors either discharge clouds of arrows from their coigns of vantage, or rush to brain their victims with stones, or to break their necks and limbs and crush in their chests, as in the slaughtering of quarry; and according to the tale of the occasional survivors—Señor Pascual Encinas and his son Manuel, Don Ygnacio Lozania, Don Andrés Noriega, Don Jesus Omada of Bacuachito, and Don Ramon Noriega of Pozo Noriega, are among the survivors and informants; also the sturdy Papago fighters, Mariana, Anton, Miguel, and Anton Castillo (whose sister died of dread while he was on the 1895 expedition)—the rushing warriors are transfigured with frenzy; their eyes blaze purple and green, their teeth glisten through snarling lips, their hair half rises in bristling mane, while their huge chests swell and their lithe limbs quiver in a fury sudden and blind and overpowering as that of springing puma or charging peccary. Of the successful assaults the ghastly end is rarely recorded, though whispered large in the lore of Sonora; in the unsuccessful assaults recounted by survivors the blood-frenzy burned but briefly and died swiftly as the disappointed warriors skulked silently behind rocks and shrubs, or fled across the sands with inconceivable fleetness. These details of battle precisely parallel the details of butchery of beastly quarry, as recounted by local observers and corroborated by Mashém's recitals.

So far as can be ascertained the parallelism between frenzied battling and furious butchery in the chase affords the chief basis for the firm

Sonoran belief that the similarity extends one step farther, and that the human victims are rent and consumed, like the beasts. There is a lamentable lack of data concerning the alleged anthropophagy of the Seri; on the one hand there is the deep-seated local opinion, generally growing stronger as the tribal territory is approached, and agreeing so well with the hunting customs, the thaumaturgic arrow-poisoning, the zoomimic handicraft, and zootheistic faith, and especially with the pervading fetish-piracy of the folk, that its validity would seem inherently probable; on the other hand, there is not only a dearth of specific positive testimony, but haciendero Encinas (best informed among Caucasians concerning Seri customs) and several of his yeomen reject the prevailing belief, while Mashém consistently repudiated the custom, both in general and in particular, and in ceremonial as well as in economic aspects, whenever and in whatever way the subject was approached during his intercourse with the 1894 expedition. On the whole, the much-mooted question of Seri cannibalism must be left open pending further inquiry, with some preponderance of evidence against the existence of the custom.

The war-frenzy of the Seri fighters is significant in its parallelism with the blood-craze of the chase, and even more so in its analogy with the warpath customs and ceremonies of most Amerind tribes and many other primitive peoples. In typical tribes the warpath custom is a most distinctive one, standing for an abnormal state of mind and an unaccustomed habit of body, perhaps to the extent of an extreme exaltation or obsession akin to intoxication, in which the ordinary ideas of justice and humanity are inhibited; among most tribes the condition is sought voluntarily and deliberately when occasion is thought to demand, and is superinduced by fasts and vigils, exciting songs and ceremonies, and related means; while among certain tribes the aid of symbolic "medicines", which may be actual intoxicants, is invoked. Thus the savage on the warpath is a different being from the same man in times of peace; viewed from his own standpoint, he is possessed of an alien and violent demon, usually that of a fantastic and furious beast-god whose rage he must symbolize and enact; viewed from the standpoint of higher culture, he is a raving and ruthless maniac whose craze is none the less complete by reason of its voluntary origin. The warpath frenzy is one of the fundamental, even if little understood, facts of primitive life, and the character of the savage tribe can not properly be weighed without appreciation of it. Now, the Seri blood-craze seems measurably distinct in two ways: in the first place, it expresses a more profound and bitter enmity toward aliens than is found among most savage tribes—i. e., it is instinctive and persistent in exceptional degree; in the second place, it is more spontaneous and explosive in its culmination when conditions favor than among tribesmen who induce the condition by elaborate preparation—i. e., it is dependent on the swift-changing hazard of warfare in exceptional

measure; so that the Seri frenzy is at once more instinctive and more fortuitous, or in general terms more inchoate, than the corresponding condition among most of their contemporaries. Accordingly the war customs, like several other features of the tribe, seem to afford a connecting link between the habits normal to carnivorous beasts and the well-organized war customs of somewhat higher culture-grades; and thus they contribute toward outlining the course of human development through some of its darker stages.

Conformably with their poverty in offensive devices, the Seri are exceedingly poor in devices for defense. It is an impressive fact that a restricted motherland which has been successfully protected against invasion for nearly four centuries of history should be destitute of earthworks, fortifications, barricades, palisades, or other protective structures; yet no such structures exist on any of the natural lines of approach, and none are known anywhere in Seriland save in a single spot—Tinaja Trinchera—where there are a few walls of loose-laid stone, so unlike anything else in Seriland and so like the structures characteristic of Papagueria as to strongly indicate (if not to demonstrate) invasion and temporary occupancy by aliens. The jacales are not fortified in the slightest degree, unless the turtle-shells with which they are sometimes shingled be regarded as armor; even the most ancient rancherias are absolutely devoid of contravallations of earth, stone, or other material; and both the structures themselves and the expressions of the folk concerning them indicate that the jacales are not regarded as fortresses or places of refuge against enemies, but only as comfortable lodges for use in times of peace. Nor are walls like those of the borderland Tinaja Trinchera known in the interior of the tribal territory—e. g., the similarly conditioned Tinaja Anita, which differs only in the greater abundance and permanence of the water-supply, is entirely devoid of artificial structures, not even a pebble or boulder being artificially placed save perchance by the casual trampling of the pathways. As already noted, the Seri seem to be practically devoid of knife-sense; they are still more completely devoid of fort-sense, although (and evidently because) they rely so fully on natural things, including tutelaries and their own fleetness, for safety.

Although devoid of even the germ of fortification-sense, so far as can be discovered, the Seri are not without a sort of shield-sense, which is of much significance partly by reason of its inchoate character. The ordinary shield is a pelican pelt, or a robe or kilt comprising several skins; it is employed either for confusing the enemy by swift brandishing, something after the fashion of the capa of the banderillero in the bull ring, or for actual protection of the body against arrows and other missiles or weapons. So far as known it is not backed or otherwise strengthened, the user relying solely on the stout integument and thick feathers—or rather on the mystical properties imputed to the pelt as the mystery-tinged investiture of their chief creative tutelary.

On the coast bucklers are improvised from turtle-shells, though, according to Mashém (confirmed by direct observation), these are not carried inland for the purpose; but the protective function imputed to the turtle was well represented in the rancheria at Costa Rica by several fetishes made from phalanges of turtle-flippers tricked out in rags in imitation of Caucasian dress (somewhat like the mortuary fetishes illustrated in figure 40*a* and *b*). On the whole, the most conspicuous feature of the individual shields or protectors is their emblematic character; they are sortilegic rather than practical, and express imputation of mystical potencies rather than recognition of actual properties; and in this as in other respects they correspond closely with the offensive devices, and aid in defining the ideas and motives of the primitive warriors.

The actually effective protection of the Seri in warfare is their fleetness, coupled with their habitual and constitutional timidity, i. e., their wildness—for they are verily, as their Mexican neighbors say, “gente muy bronco”. Moreover, they are adepts in concealing their persons and their movements behind shrubbery and rocks, and in finding cover on the barest plains; and suggestions are not wanting that the protecting shrub-clumps and rocks of their wonted ranges are credited with occult powers and elevated to the lower places of their zoic pantheon, after the customary way of that overpowering zootheism, or animism, which the Seri so well exemplify in many of their habits.

Summarily, the warfare of the Seri complements the pacific industries of the tribe in every essential respect. It is notable for improvidence, i. e., for reliance on chance; the dearth of devices for offense and defense parallels the poverty in industrial artifacts; and the disregard of fortifications is of a kind with the squandering of present food supplies and the utter neglect of provision for the future. A striking correspondence between workfare and warfare is found in the fierce blood-lust displayed alike in chase and battle, a feature manifestly borrowed from beasts and intensified by besetting beast-faith; and more striking still is the correspondence in motive, as revealed by the overlapping functions of the protective kilt, by the borrowing of animal symbols alike in peace and war, and by the imitation of animal movements on the warpath as in the chase.

In the last synthesis the warfare of the Seri may be considered as characterized by two attributes: (1) The motives, so far as developed, are zoomimic in even greater degree than the prevailing motives of the pacific industries; and (2) the methods are shaped largely by mechanical chance, like those normal to protolithic industry.

NASCENT INDUSTRIAL DEVELOPMENT

Industries form the chief bond between man and his environment. The esthetic activities arise in the individual and extend to his fellows; the institutional activities express the relations among individual men

and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for appareling and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessities of life on land are still more capricious than those alongshore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (*ante*, p. 159); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening mysticism of zootheistic faith, with its material reflection in zoomimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that accultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest.

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few accultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous.

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought.

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical

side. The Seri mind is (1) local, (2) chance-dominated, (3) exceeding lowly, and especially (4) autochthonal in its content and workings.

There is an aspect of the inference as to the local and autochthonal character of the Seri mind which is of wide-reaching application. As indicated by many tribes, though most clearly by the Seri, there is a definite relation between the somatic characteristics of primitive folk and their environment; the indications are that the relation is inversely proportionate to development, the lowliest tribes reflecting environment most closely, and the higher peoples responding less delicately to the environmental pressure in the ratio of their increased power of nature-conquest; and the relation is essentially phylogenetic, in that it sums and integrates the innumerable interactions between organic kind and environment during generations or ages. It is to be realized that the relation is not simple and direct or physiologic merely (e. g., like that between climate and the pelage of an animal), but that it is linked through the human activities; for, as is conspicuously the case in Seriland, the environment prompts exercises of particular kinds, and it is these exercises that shape the somatic features, such as strength of lung, length of limb, and the soundness of constitution displayed in physical endurance; yet the relation is none the less real, in that it operates through the activities rather than directly. The relation may be characterized with respect to mechanism as bodily responsion, or with respect to capacity as *responsivity of body*. Now, as is well illustrated by the provincial ideation of the Seri, the relation between environment and physique is accompanied by a corresponding relation between environment and thought. This relation, too, varies inversely with development, the connection being closest among the most primitive tribes, and growing less and less close with maturing mentality and proportionately increasing power of nature-contest; and the relation is still less direct (or physiologic merely) than that between the human body and its environment, in that not only the bodily activities but the instinctive and nascently ratiocinative processes are interposed. This relation between mind and environment may be characterized as mental responsion in its mechanical aspect, or as *responsivity of mind* when regarded as a psychic property.¹ Accordingly, the relation between the tribal mind and its environment, as illumined by the peculiarly delicate interactions observed among the Seri, seem to indicate the genesis and earlier developmental stages of mentality in its multifarious aspects.

The specially significant feature of the relation between environment on the one hand and body + mind on the other is its diminishing value with general intellectual advancement. Viewed serially, the

¹ The responsivity of mind has been defined elsewhere as the basis of knowledge, and as one of five fundamental principles of science (The Cardinal Principles of Science, Proceedings of the Washington Academy of Sciences, vol. II, 1900, pp. 1-12).

relation may be considered to begin in the animal realm with organisms adapted to environment through physiologic processes, and to end in that realm of enlightened humanity in which mind molds environment through complete nature-conquest. In the serial scale so defined the various primitive tribes and more advanced peoples may be arranged in the order of mental power or culture-status; when the same arrangement will express in inverse order the relative closeness with which the several tribal minds reflect their environments. It follows that the lowly minds and craft of the Seri reflect their distinctive environment with exceeding, perhaps unparalleled, closeness, because of their very lowliness; it follows, too, that any other equally lowly folk imported into the region and perfectly wonted to it by generations of experience would equally reflect the physical features of the region in their craft and in their thinking; it follows, also, that if the Seri were transported into any other district of equally distinctive physical features, they would gradually adapt themselves to the new environment—though with some added intelligence, and hence with diminished closeness, as is the way of demotic development—in such manner that their craft and thinking would reflect its features. In a more general way it follows that those similarities in culture, or activital coincidences, which have impressed the ethnologic students of the world (notably Powell and Brinton), are normal and inevitable in primitive culture and of diminishing prominence with cultural advancement.

SOCIAL ORGANIZATION

Among the Seri, as among many other aboriginal tribes, the social relations are largely esoteric; moreover, in this, as in other savage groups, the social laws are not codified, nor even definitely formulated, but exist mainly as mere habits of action arising in instinct and sanctioned by usage; so that the tribesmen could not define the law even if they would. Accordingly the Seri socialry¹ is to be ascertained only by patient observation of conduct under varying circumstances. Unfortunately, the opportunities for such observation have been too meager to warrant extended description, or anything more, indeed, than brief notice of salient points.

CLANS AND TOTEMS

The most noticeable social fact revealed about the Seri rancherias is the prominence of the females, especially the elderwomen, in the management of everyday affairs. The matrons erect the jacales without help from men or boys; they carry the meager belongings of the family and dispose them about the habitation in conformity with general custom and immediate convenience; and after the household is prepared, the men approach and range themselves about, apparently in a definite

¹ A convenient term proposed by Patton.

order, the matron's eldest brother coming first, the younger brothers next, and finally the husband, who squats in, or outside of, the open end of the bower. According to Mashém's iterated explanations, which were corroborated by several elderwomen (notably the clanmother known to the Mexicans as Juana Maria) and verified by observation of the family movements, the house and its contents belong exclusively to the matron, though her brothers are entitled to places within it whenever they wish; while the husband has neither title nor fixed place, "because he belongs to another house"—though, as a matter of fact, he is frequently at or in the hut of his spouse, where he normally occupies the outermost place in the group and acts as a sort of outer guard or sentinel. Conformably to their proprietary position, the matrons have chief, if not sole, voice in extending and removing the rancheria; and such questions as that of the placement of a new jacal are discussed animatedly among them and finally decided by the dictum of the eldest in the group. The importance of the function thus exercised by the women has long been noted at Costa Rica and other points on the Seri frontier, for the rancherias are located and the initial jacal erected commonly by a solitary matron, sometimes by two or three aged dames; around this nucleus other matrons and their children gather in the course of a day or two; while it is usually three or four days, and sometimes a week, before the brothers and husbands skulk singly or in small bands into the new rancheria.

Quite similar is the regimentation of the family groups as indicated by the correlative privileges and duties as to placement, as well as the reciprocal rights of command and the requirements of obedience. Ordinarily (especially when the men are not about) the elderwoman of the jacal exercises unlimited privileges as to placement of both persons and property, locating the ahst, the bedding, the fire (if any), and other possessions at will, and assigning positions to the members of her family, the nubile girls receiving especial attention; she is also the arbiter of disputes, the distributor of food, etc; but in case of tumult, especially when children from other jacaes are present, she may invoke the authority of the clanmother, whose powers in the rancheria are analogous to those of the younger matrons in their own jacaes. Even when the men are present they take little part in the regulation of personal conduct, but tacitly accept the decision of matron or clanmother; yet in emergencies any of the women are ready to appeal for aid in the execution of their will to a brother (preferably the elder brother) of the family, or, if need be great, to the brothers of the clanmother. So far as was observed, and so far as could be ascertained through informants, these appeals are always for executive and never for legislative or judicative cooperation; but various general facts indicate that in times of stress—in the heat of the chase, in the warpath-craze, etc—the men bestir themselves into the initiative, while the women drop into an inferior legislative place. As an illustration of the ordination in some-

what unusual circumstances, it may be noted that when the "Seri belle" (Candelaria) refused to pose for a photograph she was supported by the clanmother (Juana Maria) until the latter was placated by presents; and that when the belle refused to obey the mother's command—to the vociferous scandal of the entire group—Juana Maria appealed to Señor Encinas, as the conqueror of the tribe and hence as the virtual head of both rancho and rancheria. And when a younger Seri maiden (plate XXV) similarly refused to pose, and in like manner disobeyed her mother (again to the general disgust), the latter appealed to Mashém; when he, after first exacting additional presents for both girl and mother and a double amount for himself, put hands on the recalcitrant demoiselle and forced her into the pose required, despite the shrinking and tremulous terror perceptible even in the picture

Commonly the regimentation of family, clan, and larger group appears to be indicated approximately by the placement assumed spontaneously in the idle lounging of peace and plenty. A typical placement of a small group is illustrated in plate XIV. Here the family are assembled outside the jacal, but in the relative positions which would be assumed within. The matron (a Red Pelican woman) squats in easy reach of her few and squalid possessions; on her left, i. e., in the group-background and place of honor, sits the elderwoman of the rancheria (a Turtle); then comes the daughter of the family, followed by two girl-child guests of the group, the three occupying positions pertaining to chiefs or elder brothers or, in their absence, to daughters; opposite the matron sits a younger brother,¹ whose wife is a Turtle woman (daughter of the dame in the place of honor) and matron of another jacal. A few feet behind this brother (just outside the limits of the photograph reproduced, though shown on the duplicate negative) squats the husband, with his side to the group and face toward the direction of natural approach; while the place belonging to the sons of the family on the matron's right is temporarily occupied by a White Pelican girl, together with a dog, notable in the local pack for largely imported blood and correspondingly docile disposition. The place for the babe, were there one in the family, would be on the heap of odds and ends behind the matron. As in this group so in most others, the place of the sons is vacant; for the boys are at once the most restless and the most lawless members of the tribe—indeed, the striplings seem often to ignore the maternal injunctions and even to evade the rarely uttered avuncular orders, so that their movements are practically free, except in so far as they are themselves regimented or graded by strength and fleetness and success in hunting.

The *raison d'être* of the proprietorship and regimentation reflected in the everyday customs is satisfactorily indicated by that totemic feature of the social organization revealed in the face-painting described in

¹This man was one of those involved in the Robinson butchery on Tiburon island a few months before the picture was taken; and he was one of those executed or transported for the affair during the interval between the 1894 and 1895 expeditions.

earlier paragraphs (pp. 164–169); these symbols evidently represent an exclusively maternal organization into clans consecrated to zoic tutelaries. The tutelaries, or totems, together with the clan names and all personal designations connected with the totems, are highly esoteric, and were not ascertained save in the few cases mentioned above.¹

It should be observed that the identification of kindred by the alien observer is difficult and somewhat uncertain, since the relationships recognized in Seri socialry are not equivalent to those customary among Caucasians. It was found especially difficult to identify the husband of the jacal, partly because he is commonly incongruously younger (and hence relatively smaller) than the mistress, and partly because of the undignified position of outer guard into which he is forced by the tribal etiquette. Moreover, his connection with the house is veiled by the absence of authority over both children and domestic affairs, though he exercises such authority freely (within the customary limits) in the jacales of his female relatives. There is, indeed, some question as to the clear recognition of paternity; certainly the females have no term for “my father”, i. e., the term is the same as that for “my mother”, *em*, though the males distinguish the maternal ancestor by a suffixed syllable (*e*=“my father”; *e-ta* or *i-tah*=“my mother”), which seems to be a magnificative or an intensificative element. It is noteworthy that the kinship terminology is strikingly meager; also that while the records suggest various significant points, the material is hardly rich enough to warrant complete synthesis of the consanguineal system.

While the burden of the more permanent property pertains to the women, there is a decided differentiation of labor with a concomitant vesting of certain property in the warriors—the distinctively masculine chattels comprising arrows, quivers, bows, turtle-harpoons, etc. There are indications that the balsas, too, are regarded as masculine property. The impermanent possessions—water, food, etc—seem to be the common property of men, women, and children, except in so far as the right is regulated by regimentation; for the privileges of eating and drinking are enjoyed in the order of seniority. In the reckoning of seniority, the chief (who is commonly such in virtue of his position as nominal elder brother of a prolific dame) ranks first, and is followed by other warriors in an order affected in an undetermined way by conjugal relations as well as by their prowess or sagacity (the equivalents of age in primitive philosophy) down to an undetermined point—apparently fixed by puberty; then comes the clanmother, followed by her daughters in the order of nominal age, which is affected by the status of spouses and the number of living offspring; finally come the children, practically in the order of their strength (which also is deemed an equivalent of age), though the girls—especially those

¹ The chief object of the 1895 expedition was to pursue the inquiries concerning social organization, totems, etc; but, as mentioned elsewhere, this object was defeated by the troublous history of the tribe during the earlier part of 1895, and the consequent revival and intensification of their animosity toward aliens.

approaching nubility—receive some advantage through the connivance of the matrons. To a considerable extent in the matter of sustentation, and to a dominant degree in the matter of appareling, the distribution of values is affected by a highly significant (though by no means peculiar) humanitarian notion of inherent individual rights—i. e., every member of the family or clan is entitled to necessary food and raiment, and it is the duty of every other person to see that the need is supplied. The stress of this duty is graded partly by proximity (so that, other things equal, it begins with the nearest person), but chiefly by standing and responsibility in the group (which again are reckoned as equivalents of age), whereby it becomes the business of the first at the feast to see that enough is left to supply all below him; and this duty passes down the line in such wise as to protect the interests of the helpless infant, and even of the tribal good-for-naught or hanger-on, who may gather crumbs and lick bones within limits fixed by the tribal consensus. Beyond these limits lies outlawry; and this status arises and passes into the tribal recognition in various ways: Kolusio was outlawed for consociating with aliens, and Mashém narrowly missed the same fate at several stages of his career; the would-be grooms who fail in their moral tests are ostracized and at least semioutlawed, and range about like rogue elephants, approved targets for any arrow, until they perish through the multiplied risks of solitude, or until some brilliant opportunity for display of prowess or generosity brings reinstatement; deformed offspring are classed as outside the human pale, even when the deformity is defined rather by occult associations than by physical features; abnormal and persistent indolence, too serious for scorn and ostracism to cure, may also outpass the tribal toleration; and, as indicated by Mashém's guarded expressions and slight additional data, disease, mental aberration, and decrepitude are allied with indolence and deemed sufficient reason for excluding the persistently helpless from the tribal solidarity, and hence from recognized humanity—and the fate of the outlaw, even if nothing more severe than abandonment in the desert, is usually sure and swift. The entire customs of outlawry among the Seri are singularly like those of gregarious animals, including especially kine and swine in domestication. Now, studied equity in the distribution of necessaries might seem to be allied to thrift; but it is noteworthy that this is not so among the Seri, who take thought for one another but not for the morrow, who seem to have no conception of storage (save an incipient one in connection with water and the repulsive notion underlying the "second harvest"), and who habitually gorge everything in sight until their stomachs and gullets are packed—and then waste the fragments.

The division of labor which affects proprietary interests is undoubtedly affected in turn by the militant habit of the tribe and by the frequent decimation of the warriors. In general, the adult males limit their work to fighting and fishing, with occasional excursions into the hunt-

ing field; though by far the greater part of their time is spent in listless lounging or heedless slumber under the incidental guard of roaming youths and toiling women. The matrons are the real workers in the tribal hive; they are normally alert and active, passing from one simple task to another, gathering flotsam food along the beach or preparing edibles in the shadow of the jacal, with an eye ever on material possessions and children; they frequently join in hunting excursions of considerable extent; they are the chief manufacturers of apparel, utensils, and tools; and the scions of Castilian caballeros are not infrequently staggered at the sight of half a dozen Seri women "milling" a band of horses, and at intervals leaping on one to kill it with their hupfs. The masculine drones are the more petted and courted by reason of their fewness, for during a century or two, at least, the women have far outnumbered their consorts—a disproportion doubtless tending in some respects toward the disintegration of the clan system and, reciprocally, toward the firmer union of the tribe.

One of the most noteworthy extensions of feminine functions among the Seri is toward shamanism. So far as could be ascertained from Mashém and the associated matrons at Costa Rica, it is such beldams as Juana Maria who concoct the arrow "poison", compound both necromantic medicines and curative simples, cast spells on men and things, and even fabricate the stone arrowpoints and counterfeit cartridges; though unhappily the data are neither so full nor so decisive as desirable.¹

Conformably with their prominence in proprietary affairs, the Seri matrons seem to exercise formal legislative and judicative functions; for not only do they hold their own councils for the arrangement of the domestic business of the rancherias, but they also participate prominently in the tribal councils (as explained by Mashém), and play important rôles in carrying out the decisions of such councils—as when they cooperate with war parties as decoys, or journey across their bounding desert to spy out the land of the enemy.

On the whole, it would appear that the clan organization of the Seri conforms closely with that characteristic of savagery elsewhere, especially among the American aborigines. The social unit is the maternal clan, organized in theory and faith in homage of a beast-god, though defined practically by the ocular consanguinity of birth from a common line of mothers; yet the several units are pretty definitely welded into a tribal aggregate by common feelings, identical interests, and conjugal ties. The most distinctive features brought out by the incomplete investigation are the somewhat exceptional manifestation of property-right in the females, the singularly strong sense of maternal relation, and the apparent prominence of females in shamanistic practices as well as in the tribal councils.

¹ The agency of the women in applying the arrow "poison" was noted by Hardy; cf. p. 258.

CHIEFSHIP

The unformulated tribal laws of the Seri are intimately connected with leadership, which is, in turn, largely a reflection of personal characteristics; so that the tribal organization is about as variable as that of the practically autonomous herds of cattle ranging the Sonoran plains adjacent to Seriland. Indeed, just as the stock-clans enjoy a precedence on pasturage and at waterholes, determined by the valor and strength of the bulls by which they are led, so the Seri clans appear to be graded by the prowess of their masculine leaders, combined with the sortilegic success of the leaders' consorts; while, just as the leadership of the cattle shifts from band to band as the years go by, according to the fairly equal hazard of natural selection, so the clan dynasties of the human group rise, flourish, and decline in an endless succession shaped by the chances of birth and survival under a capricious environment, by the fate of battles internecine and external, and by various other factors. The instability of the Seri organization is demonstrated by the tribal changes recorded in history, as well as by the vicissitudes within the memory of Señor Encinas and others. At the beginning of the records the Upanguayma were already exiled from Seriland proper and apparently suffering from raids of their collinguals; within a century the Guayma, also, were expatriated and nearly annihilated; then, in the early part of the present century, the Tepoka were extruded and (after a series of wars in active progress in Hardy's time) forced far up the coast to one of the poorest habitats ever occupied by any folk. So, too, throughout the Encinas régime the internal dissensions continued whenever the clans were not combined against aliens; and the veteran pioneer has seen much intratribal strife, attended by the rise and passing of many chiefs, both acknowledged and pretended, and often exercising chiefly prerogatives two or three at a time. This instability grows largely out of the fact that the essential unit is the clan, and that the tribe is nothing more than a lax aggregation; and it is measurably explained by the crude customs accompanying the choice of leaders.

As already noted, the clan organization is maternal, and the clan-mother is the central figure of the group; but the executive power resides in her brothers in the order of seniority—i. e., while the personal arrangement of the group is maternal, the appellate administration is fraternal. So far as could be ascertained, the form of government is clearly discriminable from that commonly styled avuncular; for, in the first place, the minor administration accompanying the control of property invests the elderwomen with exceptional legislative and judicative powers, while, in the second place, there are no old men (by reason of the militant habit), so that the reverence for age so assiduously cultivated in primitive life extends to matrons much more than to men.

Classed with respect to major administration, therefore, the clan may be regarded as an informal *adelphiarchy* (ἀδελφός and ἄρχος) or *adelphocracy* (ἀδελφός and κρατός). It has none of the elements of the patriarchy, since male lineage is not recognized, and can not be classed as a matriarchy, since the clanmother is administratively subordinate to her brothers; while the avuncular functions are apparently inchoate and indirect, i. e., exercised only through or in conjunction with the clanmother. In short, the clan is ordained or regimented in ostensible accordance with physical power, though the real faculty is confused (after the fashion of primitive thinking generally) with mystical faculties, imputed largely on magical grounds but partly on grounds of age-reverence, etc. Now, when two or more clans combine, the basis on which the common chiefship is determined is similar to that determining the clan leadership; at the outset three factors enter, viz, (1) the seniority of the clans in the accepted tribal mythology (2) the prowess of the respective clan leaders (always weighed in conjunction with the shamanistic potency of their consorts), and (3) the numerical strength of the respective clans; but practically, so far as can be judged from all available information, the choice really reflects physical force, since in case of doubt the strongest and bravest man becomes the eldest by virtue of his strength and bravery, while the strongest clan finds fair ground for claiming seniority in the very fact of its strength. Naturally disputes arise in the adjustment of the several relations; and in the actual analysis in council, the dispute is commonly reduced to a contest between gods and men, i. e., between the claims for mystical and magical potencies on the one hand and the claims of brawn and bone on the other hand, so that strength wins, unless omens or prodigies turn the scale—which happens often enough to keep the subjective and the objective elements in fairly equal balance. Sometimes the contests are quickly settled; again they last for months, during which the tribe struggles under its weight of Cerberus heads; and repeatedly the disputes have ended in the annihilation of clans, or even in the tribal fissions attested by the recorded and traditional history of the Serian family.

The chiefship once determined, the leader bends all energies toward maintaining the position by which he is dignified and his clan exalted. He recognizes his responsibility for the welfare of the tribe—not only for success in battle and food-getting, but for stilling storms at sea, protecting the aguajes from the drought-demons, and securing all other benefits, both physical and magical; he must be aggressive yet cautious on the warpath, fleet and enduring in retreat, indomitable in the chase, bold but not reckless on the balsa, and above all panoplied and favored by the shadowy potencies of air and earth and waters; he must be the local and lowly Admirable Crichton, and his never-neglected watchword must be *noblesse oblige*. His practical devices for maintaining prestige are many and diverse; it is commonly the chief who carries the sym-

bolic weapon, the counterfeit cartridge, the imitation machete, or other charm against alien power; it is usually he who wears the white man's hat or random garment in lieu of the deer or lion mask of earlier days; and during recent years his most-prized fetish, and one which practically insures the support of his fellows, is a written certificate of his chiefship from Señor Encinas, or, still better, from El Gobernador at Hermosillo. Yet he is a throneless and even homeless potentate, sojourning, like the rest of his fellows, in such jacales as his two or three or four wives may erect, wandering with season and sisterly whim, chased often by rumors of invasion or by fearsome dreams, and restrained by convention even from chiding his own children in his wives' jacales save through the intercession of female relatives.

In 1894 the head chief was reported to be on Tiburon; the putative chief of the rancheria at Costa Rica was the taciturn giant known as El Mudo (plate XIX); while Mashém (or Juan Estorga) was the head of one of the Pelican clans.

ADOPTION

One of the more important factors in demotic development among primitive peoples (probably second only to interclan marriage in extending sympathy and unifying law) is adoption; and special efforts were made to obtain data relating to the subject. Direct inquiries were futile, the responses indicating that the entire subject is foreign to the thought of the tribe; but three sporadic and measurably incongruous examples of quasi adoption are worthy of record.

The most specific case is that of Lieutenant Hardy, who visited Isla Tiburon in 1826, and was fortunate in gaining the confidence of the tribe through successful medical treatment of the wife of the chief. On his second landing he was greeted with many expressions of gratitude, which were especially exuberant on the part of the daughter of the family (always a personage in Seri custom), who insisted on painting his face. He specifies:

Not wishing to deny her the indulgence of this innocent frolic, I quietly suffered her to proceed. She mixed up part of a cake of blue color, which resembles ultramarine (and of which I have a specimen), in a small shell; in another, a white color, obtained by ground talc, and in a third was mixed a color obtained from the red flint-stone of the class which I before stated was to be found on Seal Island, and resembled cinnabar. With the assistance of a pointed stick the tender artist formed perpendicular narrow stripes down my cheeks and nose, at such distances apart as to admit of an equally narrow white line between them. With equal delicacy and skill the tops and bottoms of the white lines were finished off with a white spot. If the cartilage of my nose at the nostrils had been perforated so as to admit a small, round, white bone, five inches in length, tapering off at both ends and rigged something like a cross-jack yard, I might have been mistaken for a native of the island. As soon as the operation was finished, the whole party set up a roar of merry laughter, and called me "Hermano, Capitan Tiburow," being the very limited extent of their knowledge of Spanish.¹

¹ Travels, p. 286.

While the lieutenant attached no significance to the painting, the procedure would seem to have been a ceremonial adoption, such as might, for example, be used in connection with a confederate clan. The description of the painting is sufficiently explicit to identify the totem with that of the Turtle clan, represented by the clanmother and the daughter of the clan at Costa Rica in 1894 (plates XVIII and XXIV); but it is noteworthy that the salutation with which the ceremony terminated, and which may be rendered "Captain-Brother of the Sharks", would seem to identify the totem with the shark rather than the turtle.¹

The second case of adoption (if so it may be styled) was that of Señor Encinas, after his bloodiest battle, in which nearly all of the Seri warriors were left on the field. In this case there was no ceremony, or at least none remembered by the beneficiary; he was merely informed by a delegation of aged dames that thenceforth he would be regarded as a stronger and more invulnerable chief (shaman) than any member of the tribe, and hence as the tribal leader.

The third instance is still less definite, though it seems to be trustworthy. There is a widespread tradition throughout Sonora that in the course of a brush between a band of Papago hunters and a marauding bunch of Seri warriors in the mountains southeast of Cieneguilla twenty-five or thirty years ago, a Papago maiden was captured and carried off to Tiburón; and that for some years thereafter—i. e., until the Papago had taken ample blood-vengeance—the intertribal animosity was exceptionally bitter. No wholly satisfactory basis for the traditions could be found among the Papago, though some of the silences of the old men were suggestive; nor was the tradition fully credited by Señor Encinas, despite its deep lodgment in the minds of some of his yoëmanry. When Mashém was interrogated on different occasions, he merely shook his head in stolid silence; but when the device was adopted of inquiring the number of Papago children brought into the tribe through this woman he responded promptly with a snort of scorn, and followed this with the explanation that she never had children, and could not because she was an alien slave. The explanation was corroborated by clanmother Juana Maria and other matrons, with sundry expressions of contemptuous disapproval of the inquiry and scorn of the very idea that aliens could fructify within the tribe. Later, the ice being broken, Mashém intimated that the woman had recently died of old age and its consequences—doubtless as an outcast. On the whole, the direct testimony would seem to substantiate the tradition, and to supplement it with the short and simple annals of a spouseless and childless life (incredible of other tribes, but consistent

¹This identification may possibly be correct; the collocation of the totem with the turtle was shaped through unwilling and perhaps misleading responses made by Mashém to inquiries in 1894—these responses denoting a sea monster which in the beginning helped the Ancient of Pelicans to make the world by pushing from below, and which is now very good food—a description apparently fitting the turtle more closely than the other animal.

with the customs of the Seri), endured for many years and ending at last in unpitied death.

Collectively the cases seem to define a germ, rather than a mature custom, of adoption. In the first case a benefactor (by means regarded as magical) was formally inducted into the reigning family; in the second case the conquering hero (through what were again regarded as magical means) was less formally recognized and venerated, even worshiped, as an all-powerful shaman; while in the third case a representative of the doughtiest alien tribe was enslaved, probably with motives akin to those expressed in the carrying of chargeless guns, the making of imitation machetes, and other fetishistic devices. Except in the first instance there is no indication of consistent custom; but since the entire history of the tribe clearly contradicts regulated adoption of aliens (and indeed affords no other example), it must be inferred that any such custom is intratribal rather than intertribal.

MARRIAGE

The most striking and significant social facts discovered among the Seri relate to marriage customs.

As noted repeatedly elsewhere, the tribal population is preponderantly feminine, so that polygyny naturally prevails; the number of wives reaches three or possibly four, averaging about two, though the younger warriors commonly have but one, and there are always a number of spouseless (widowed) dames but no single men of marriageable age. So far as could be ascertained, no special formalities attend the taking of supernumerary wives, who are usually widowed sisters of the firstspouse; it seems to be practically a family affair, governed by considerations of convenience rather than established regulations—an irregularity combining with other facts to suggest that polygyny is incidental, and perhaps of comparatively recent origin.

The primary mating of the Seri is attended by observances so elaborate as to show that marriage is one of the profoundest sacraments of the tribe, penetrating the innermost recesses of tribal thought, and interwoven with the essential fibers of tribal existence. Few if any other peoples devote such anxious care to their mating as do the Seri;¹ and among no other known tribe or folk is the moral aspect of conjugal union so rigorously guarded by collective action and individual devotion.

The initial movement toward formal marriage seems to be somewhat indefinite (or perhaps, rather, spontaneous); according to Mashém it may be made either by the prospective groom or else by his father, though not directly by the maiden or her kinswomen. In any event the prerequisites for the union are provisionally determined in the suitor's family; these relate to the suitability of age, the propriety of

¹ Perhaps the closest parallel in this respect is that found in the elaborate marriage regulations prevailing among the Australian aborigines, as described by Spencer and Gillen, Walter E. Roth, and other modern observers.

the clan relation, etc; for no stripling may seriously contemplate matrimony until he has entered manhood (apparently corresponding with the warrior class), nor can he mate in his own totem, though all other clans of the tribe are apparently open to him; while the maiden must have passed (apparently by a considerable time) her puberty feast. In any event, too, the proposal is formally conveyed by the elderwoman of the suitor's family to the maiden's clanmother, when it is duly pondered, first by this dame and her daughter matrons; and later (if the proposal is entertained) it is deliberated and discussed at length by the matrons of the two clans involved, who commonly hold repeated councils for the purpose. At an undetermined stage and to an undetermined degree the maiden herself is consulted; certainly she holds the power of veto, ostensible if not actual. Pending the deliberations the maiden receives special consideration and enjoys various dignities; if circumstances favor, her kinswomen erect a jacal for her; and even if circumstances are adverse, she is outfitted with a pelican robe of six or eight pelts and other matronly requisites. When all parties concerned are eventually satisfied a probationary marriage is arranged, and the groom leaves his clan and attaches himself to that of the bride. Two essential conditions—one of material character and the other moral—are involved in this probationary union; in the first place, the groom must become the provider for, and the protector of, the entire family of the bride, including the dependent children and such cripples and invalids as may be tolerated by the tribe—i. e., he must display and exercise skill in turtle-fishing, strength in the chase, subtlety in warfare, and all other physical qualities of competent manhood. This relation, with the attendant obligations, holds for a year, i. e., a round of the seasons. During the same period the groom shares the jacal and sleeping robe provided for the prospective matron by her kinswomen, not as privileged spouse, but merely as a protecting companion; and throughout this probationary term he is compelled to maintain continence—i. e., he must display the most indubitable proofs of moral force. During this period the always dignified position occupied by the daughter of the family culminates; she is the observed of all observers, the subject of gossip among matrons and warriors alike, the recipient of frequent tokens from designing sisters with an eye to shares of her spouse's spoils, and the receiver of material supplies measuring the competence of the would-be husband; through his energy she is enabled to dispense largess with lavish hand, and thus to dignify her clan and honor her spouse in the most effective way known to primitive life; and at the same time she enjoys the immeasurable moral stimulus of realizing that she is the arbiter of the fate of a man who becomes warrior or outcast at her bidding, and through him of the future of two clans—i. e., she is raised to a responsibility in both personal and tribal affairs which, albeit temporary, is hardly lower than that of the warrior-chief. In tribal theory the moral test measures

the character of the man; in very fact, it at the same time both measures and makes the character of the woman. Among other privileges bestowed on the bride during the probationary period are those of receiving the most intimate attentions from the clanfellows of the groom; and these are noteworthy as suggestions of a vestigial polyandry or adelphogamy. At the close of the year the probation ends in a feast provided by the probationer, who thereupon enters the bride's jacal as a perpetual guest of unlimited personal privileges (subject to tribal custom); while the bride passes from a half-wanton heyday into the duller routine of matronly existence.

These details were elicited at Costa Rica in 1894 through methodical inquiries made in connection with the linguistic collection. This collection was made with the cooperation of Señor Alvemar-Leon as Spanish-English interpreter, together with Mashém and (commonly) the clanmother known as Juana Maria. Usually quite a group of Seri matrons with two or three warriors were gathered about, and to these Mashém frequently appealed for advice and verification, while they constantly expressed approval or disapproval of questions and replies, as gathered through Mashém's words and mien, in such manner as to afford a fair index of their habitual thought—e. g., when the Seri vernacular for "twins" was obtained and the inquiry was extended (by normal association of ideas) to the term for "triplets", Mashém collapsed into moody silence while the rest of the group decamped incontinently with horror-stricken countenances—thereby suggesting cautious subsequent inquiry, and the discovery that triplets are deemed evil monsters and their production a capital crime. It was in one of the earlier conferences that the first intimations concerning the unusual marital customs were incidentally brought out; the Caucasian interpreter and bystanders were diverted by the naive reference to the moral test, but their expressions were hastily checked lest the native informants might be startled and rendered secretive; then, during two later conferences, when Mashém and several matrons were freely participating in the proceedings, the line of inquiry was so turned as to touch on various aspects of the marriage custom and bring out all essential features; so that much confidence is reposed in the accuracy of the details.¹ The confidence in the verity of the customs was such as not to be impaired seriously by the fact that no records of coincident moral tests were known in the voluminous literature of marriage and its concomitants; nor was it shaken by the still weightier fact that none of the experienced ethnologists to whom inquiries were addressed during ensuing months were acquainted with parallel customs—indeed the only shadow of corroboration thus obtained came in the form of references to the widespread requirement of continence in war and ceremonies,

¹ It may be observed that Kolusio, when visited in January, 1896, failed to corroborate the descriptions of Mashém and the matrons; but his failure occasioned little surprise for the reason that he has not lived with his tribe since early boyhood, and is equally uninformed (or uncommunicative) concerning the myths, ceremonies, and even the totems of the tribe.

and to an affectation of self-restraint for a moon on the part of Zuñi grooms noted by Frank Hamilton Cushing. Accordingly the facts were announced in a preliminary paper,¹ and were shown to stand in such relation to the marital customs of other aboriginal tribes as practically to demonstrate their validity, and at the same time to locate the Seri customs on a lower plane of cultural development than any hitherto definitely recognized.

Happily, subsequent researches have resulted in the discovery of records corroborative of the primitive customs observed by the Seri, and also of the assignment of serial place to these customs. The most specific record is that of John Giles (or Gyles), who spent his youth as a captive among the northeastern Algonquian Indians (probably the Maliseet or some closely related Abnaki tribe), from August 2, 1689, to June 28, 1698. Referring to the marital customs of the tribe, he observed:

If parents have a daughter marriageable, they seek a husband for her who is a good hunter. If she has been educated to make *monoodah* (Indian bags), birch dishes, to lace snowshoes, make Indian shoes, string wampum belts, sew birch canoes, and boil the kettle, she is esteemed a lady of fine accomplishments. If the man sought out for her husband have a gun and ammunition, a canoe, a spear, a hatchet, a monoodah, a crooked knife, looking-glass and paint, a pipe, tobacco, and knot-bowl to toss a kind of dice in, he is accounted a gentleman of a plentiful fortune. Whatever the new married man procures the first year belongs to his wife's parents. If the young pair have a child within a year and nine months, they are thought to be very forward and libidinous persons.²

This record is of peculiar interest in that it definitely specifies a custom corresponding with the material test of the Seri, and unmistakably implies the existence, at least in vestigial or sentimental form, of a custom corresponding with the moral test of Seriland; and it is particularly noteworthy as coming from a remote tribe occupying a distant part of the continent.

A somewhat less specific corroboration is found in Lawson's account of the Carolina tribes. He observes:

When any young Indian has a mind for such a girl to his wife, he, or some one for him, goes to the young woman's parents, if living; if not, to her nearest relations, where they make offers of the match betwixt the couple. The relations reply, they will consider of it; which serves for a sufficient answer, till there be a second meeting about the marriage, which is generally brought into debate before all the relations, that are old people, on both sides, and sometimes the king, with all his great men, give their opinions therein. If it be agreed on, and the young woman approve thereof, for these savages never give their children in marriage without their own consent, the man pays so much for his wife; and the handsomer she is the greater price she bears. Now, it often happens that the man has not so much of their money ready as he is to pay for his wife; but if they know him to be a good hunter, and that he can raise the sum agreed for, in some few moons, or any little

¹ The Beginning of Marriage, *American Anthropologist*, vol. ix, 1896, pp. 371-383.

² Memoirs of Odd Adventures, Strange Deliverances, etc. in the Captivity of John Giles, Esq., Commander of the Garrison on Saint George river, in the District of Maine. Written by Himself. Originally published at Boston, 1736. Printed for William Dodge. Cincinnati: Spiller & Gates, printers, 168 Vine street. 1869.—P. 45.

time they agree, she shall go along with him as betrothed, but he is not to have any knowledge of her till the utmost payment is discharged; all which is punctually observed. Thus they lie together under one covering for several months, and the woman remains the same as she was when she first came to him.¹

This record also is peculiarly pertinent, partly in that it practically corroborates the Seri testimony, but chiefly in that it indicates definite transition toward a higher culture-plane in which the primitive material test is at least partially replaced by a commutation in goods or their equivalents.

On reducing the marital customs of the Seri to conventional terms, the more prominent features are found to be (1) strict clan exogamy and (2) absolute tribal endogamy, together with (3) theoretical or constructive monogamy, coupled with (4) vague traces of polyandry, and (5) an apparently superficial polygyny, as well as (6) total absence of purchase or capture of either spouse.

On reviewing the customs in the light of their influence on the everyday life of the tribe, certain features stand out conspicuously: (1) Perhaps the most striking feature is the collective character of the function; for while the movement originates in personal inclination on the part of the suitor and is shaped by personal inclination on the part of the maiden, all manifestations of inclination are open and public (at least to the elders of the two clans involved), while the personal sentiments on both sides are completely subordinated to the public interests of clans and tribe as weighed and decided by the matronly lawgivers and adelphiarchal administratives. Thus neither man nor maid mates for thonself, but both love and move in the tribal interests and along the lines laid down by the tribal leaders. (2) As a corollary or a complement (according to the viewpoint) to the collectivity of the mating, the next most striking feature is the formal or legal aspect of the union; for the entire affair, from inception to consummation, is rigorously regulated by precedents and usages handed down from an immemorial past. Thus the roots of young affection are not destroyed but rather cultivated, though the burgeoning vine and the outreaching tendrils are trained to a social structure shaped in ages gone and kept in the olden form by unbroken tradition. (3) A collateral feature of the customs is the necessary reaction of the requirements on individual character of both groom and bride; for the would-be warrior-spouse is compelled to display high qualities of physical and moral manhood on pain of ostracism and outlawry, so that his passions of ambition and affection are at once stimulated to the highest degree, while the maiden's pride of blood and possession and her sense of regnant responsibility are fostered to the utmost. The brief preliminary courtship and the long probationary mating mark an era of intensification in two lives at their most impressionable stage; and if there be

¹ The History of Carolina, etc, by John Lawson (1714), reprint of 1860, pp. 302-303. Attention was called to this passage by Mr James Mooney.

aught in the simple yet puissant law of conjugal conation—that law whose motive underlies the world's song and story and all the pulsing progress of mankind as the inspiration of most men's work and most women's hopes—the vital intensity of this era passes down the line of blood-descent to the betterment of later generations. (4) Another collateral feature is the necessary reaction on clan and tribe; for not only does the individual character-making raise the average physique and morale of the group, but the carefully studied restraint of excessive individuality serves to strengthen still further the tribal bonds and to lift still higher the racial bar against aliens. The blackest crime in the Seri calendar is the toleration of alien blood; and no more effective device could be found for keeping alive the race-sense on which this canon depends than that virtually sacramental surveillance of sexual intimacy which Seri usage requires.¹

On scanning the conventional classifications of human marriage in the light of the Seri customs, it becomes clear that these customs define a plane not hitherto recognized observationally. For convenience, this plane and the mode of marriage defining it may, in special allusion to the correlative race-sense, be styled *ethnogamy*; and the more systematic characters of this mode and plane of marriage may be outlined briefly:

1. The most conspicuous character of ethnogamic union, as manifested in the type tribe, is its absolute confinement to the consanguineal group. The breach of this limitation is hardly conceivable in the minds of the group, since aliens are not classed as human, nor even dignified as animals of the kinds deified in their lowly faith, but condemned as unclean and loathsome monsters; yet the infraction has a sort of theoretical place at the head of their calendar as an utterly intolerable crime. In respect to this character, ethnogamy corresponds fairly with the endogamy of McLennan, Spencer, and others, i. e., with the tribal endogamy of Powell.

2. A hardly less conspicuous character of ethnogamic union is the formality, or legality, accompanying and reflecting the collective nature of the function. In this respect ethnogamy is the direct antithesis of that hypothetical promiscuity postulated by Morgan and adopted by Spencer, Lubbock, Tylor, and others; and the customs of the type tribe go farther, perhaps, than any other example in verifying the alternative

¹ The remarkable race-sense of the tribe, with the conjugal conation in which it seems to root, are discussed ante, pp. 160-163. There is nothing to indicate, and much to contraindicate, that the Seri are consciously engaged in stirpiculture; yet their social and fiducial devices would seem to be no less effective in developing race-sense, with its concomitants, than were those of prehistoric men in developing the physical attributes of animal associates, such as the wool-bearing of the sheep, the egg-laying of the fowl, and the milk-giving of the cow; or the still more striking mental attributes, such as the servility of the horse, the fidelity of the dog, and the domesticity of the cat. All these attributes are artificial, though not consciously so to their producers, hardly even to modern users; they are by-products of long-continued breeding and exercise, commonly directed toward collateral ends (as when the horse was bred for speed, the dog for hunting, and the fowl and cat for beauty); and, similarly, the Seri race-sense would seem to be largely a by-product of faith-shaped customs designed primarily to propitiate or invoke mystical potencies—yet the collateral effect is not diminished because overlooked in the primary motive.

assumption of Westermarck that the course of conjugal development is rather from monogamy toward promiscuity than in the reverse direction.

3. A noteworthy character of ethnogamic union is the absence of capture of either bride or groom. Any semblance of capture would indeed be wholly incongruous with the rigid confinement of union to members of the group; it would also be incongruous with the exceeding formality and necessary amicability of both preliminary and concomitant arrangements.

4. Another noteworthy character is the total absence of purchase on either part. Although a material condition attends the union, it is essentially a test of character, and is applied in such wise as to dignify the feminine element rather than to degrade it like barbaric wife-purchase; while any semblance of purchase would be incongruous with the economic condition of a tribe practically destitute of accumulated property or even of thrift-sense.

5. A significant character of ethnogamic union, as exemplified in the type-tribe, is the ceremonial or constructive monogamy. While there are obscure (and presumptively vestigial) traces of polyandry or adelphogamy, and while an informal polygyny is practiced by the chiefs and older warriors, the formal matings are between one man and one woman, and appear to be permanent.

Now, on comparing these characters with those revealed in the marital customs of other tribes and peoples, they are found to betoken a notably provincial and primitive culture-stage. Perhaps the nearest American approach to the Seri customs is found among certain California aborigines, notably the Yurok and Patawat tribes, who recognize the institution of "half-marriage";¹ but here the material test of Seriland is replaced by purchase, while no trace of the moral test is found (even as among the Carolina Indians, according to Lawson); moreover, while these tribes discourage alien connections, they are not absolutely eschewed and reprobated as among the Seri. Other notably primitive customs, like those so fully described by Spencer and Gillen, have been found among the Australian aborigines;² but even here a part only of the marriages are regulated by amicable convention, while others are effected by (1) charm, (2) capture, and (3) elopement; and these collateral devices imply intertribal relations of a kind incongruous with the ethnogamic habit and utterly repugnant to the ethnogamic instinct. In both cases, accordingly, the marital customs clearly imply (and actually accompany) a much more highly differentiated socialry and economy than that of the Seri. The same is true of that vestigial custom of the Scottish clans known as handfasting, which is, moreover, a direct antithesis of the Seri custom in that it carries a warrant for, rather than an abridgment of, conjugal prerogatives; and the same

¹Contributions to North American Ethnology, vol. III, 1877 (Tribes of California, by Stephen Powers), pp. 56, 98.

²The Native Tribes of Central Australia, 1899, pp. 554-560 and elsewhere.

might be said also of various South American, African, and southeastern Asian customs.

Certain representative North American customs have already been seriated in connection with the Seri customs, and their relations are of sufficient significance to warrant recapitulation. The series begins with the maternally organized and practically propertyless Seri. Next stand the Zuñi, with an essentially maternal organization, the vestigial moral test of the groom noted by Cushing, and a concomitant material test verging on purchase; so, too, monogamy persists, while the function remains largely collective, and is regulated by the elders, though the bride enjoys special prerogatives; and the fierce tribal endogamy is relaxed, though clan exogamy is enforced. Measurably similar to those of the Zuñi are the marital customs of the peaceful Tarahumari tribe of northern Mexico and the once warlike Seneca tribe of northeastern United States, although among both of these more cosmopolitan peoples the regulations are less closely similar to the Seri customs than are those of the Pueblo tribe named. Next in order of marital differentiation stand the Kwakiutl and Salish tribes of British Columbia, in which the social organization has practically passed into the paternal stage; here the laws of monogamy, clan exogamy, and tribal endogamy are materially relaxed, the moral test is lost among the Kwakiutl and reduced to a curious vestige among the Salish, while the material test is commuted into the making of expensive presents. Still more remote from the initial stage is the marriage of the paternally organized Omaha, among whom tribal endogamy is prevalent but not absolute, while polygyny is customary; among whom the moral test seems wholly obsolete, while the material test is completely replaced by purchase (or at least by the interchange of expensive presents); and among whom, concordantly, the feminine privileges are few and the females are practically degraded to the rank of property of male kindred or spouses. These several customs fall into a natural order or series definitely coordinated with the esthetic, the industrial or economic, and the general institutional or social conditions of the respective tribes; and it is noteworthy that they mark successive stages in that passage from the mechanical to the spontaneous which characterizes demotic activity.¹

In brief, ethnogamy, as exemplified by the type tribe, accompanies that strictly maternal organization which marks the lowest known stage of social development; it accompanies also a rudimentary esthetic condition in which decorative symbols are restricted to the expression of maternal relation; it accompanies, in like manner, an inchoate economic

¹Cf. *The Beginning of Marriage*, op. cit. The conclusion from the details discussed in this paper is as follows: "Summarizing the tendencies revealed in this history, it would appear that the course of evolution [of conjugal institutions] has been from the simple to the complex, from the definite to the indefinite, from the general to the special, from the fixed to the variable, from the involuntary to the voluntary, from the mechanical to the spontaneous, from the provincial to the cosmopolitan, or, in brief, from the chiefly biotic to the wholly demotic" (p. 283).

condition characterized by absence of property and thrift-sense; while its most essential concomitant is extratribal antipathy too bitter to permit toleration of alien blood, or even of alien presence save under the constraint of superior force.

MORTUARY CUSTOMS

The prevailing opinion among the better informed Caucasian neighbors of the Seri is that the tribesmen display an inhuman indifference to their dead; and this opinion is one of the factors—combining with current notions as to cannibalism and arrow-poisoning and beastlike tothing in battle—involved in the widespread feeling that the tribesmen are to be accounted as mongrel and uncanny monsters rather than human beings.

The opinion that the Seri neglect their dead on occasion would seem to rest on a considerable body of evidence; Mendoza's record of the numberless neglected corpses of warriors polluting the air and poisoning the streams of Cerro Prieto in 1757 would seem to be unusual only in its fulness; and Señor Encinas, albeit so conservative as to repudiate the reputed anthropophagy and to recognize better qualities among the folk than any contemporary, declares that they are utterly negligent of their dead, save that when the bodies lie near rancherias heaps of brambles are thrown over them to bar—and thus to lessen the disturbance from—prowling coyotes. Quite indubitable, too, is the specific testimony of vaqueros to the effect that Seri raiders overtaken by the Draconian penalty of the frontier merely lie where they fall, even when this is well within reach of the tribesmen, Don Andrés Noriega's verification of his boast (ante, p. 113) being an instance in point. On the other hand stands the conspicuous fact (unknown to the frontiersman) that well-marked cemeteries adjoin some of the rancherias of interior Seriland. The sum of the somewhat discrepant evidence accords with a characteristically unsatisfactory statement by Mashém, to the effect that the mourning ceremonies are important only in connection with women—i. e., matrons—because “the woman is just like the family” (“la muger es como la familia”); and this intimation, in turn, is corroborated by the single known instance of inhumation in Seriland, as well as by certain indirect indications connected with the scatophagic customs (ante, p. 213). On the whole it seems certain that the mortuary ceremonies attain their highest development in connection with females, the recognized blood-bearers and legislators of the tribe.

The special dignification of females in respect to funerary rites is without precise parallel among other American aborigines, so far as is known, but is not without analogues in the shape of (presumptive) vestiges of a former magnification of matrons in the mortuary customs of certain tribes. The vestiges are especially clear among the Iroquoian Indians, whose aboriginal socialry coincided with that of the

Seri at various points: witness the following passage from the Onondaga mourning ritual, as collected and translated by Hewitt:

Now, moreover, again, another thing, indeed, our voices come forth to utter; and is it not that that we say, that far yonder the Hoyaner [chief of highest grade] who labored for us so well is falling away as falls a tree? So, moreover, it is these things that he bears away with him—this file of mat-carriers, warriors all, visible and present here; also this file of those who customarily dance the corn-dances [the women]—they go prosperously. And alas! How utterly calamitous is that thing that occurs when the body of this woman falls! For, verily, far yonder in the length of the file will the file of our grandchildren be removed! These our grandchildren who run hither and thither in sport, these our grandchildren who by creeping drag themselves about in the dust, these our grandchildren whose bodies are slung to cradle-boards, and even those of them whose faces are looking hitherward as they come under the ground.¹

The identifiable cemeteries of Seriland are few and small—much less populous than might be expected of a tribe numbering several hundreds for centuries, and able to maintain well-worn trails threading all parts of their rugged domain. Three graves were noted near the abandoned rancheria at Pozo Escalante; one was observed near a jacal skeleton at Barranca Salina; five or six were made out doubtfully on a low spur adjacent to Punta Antigualla; another was found near the rancheria midway thence to Punta Ygnacio; still another was doubtfully identified hard by a ruinous jacal just where the foothills of Sierra Seri descend to the plain stretching toward Punta Miguel; and this distribution may be deemed representative. A scant half-dozen perceptible graves were observed near the considerable rancheria of Punta Naragansett, which was numerous during the Dewey surveys of 1873; one was found adjoining the old jacal near Campo Navidad; but none were discovered in connection with the extensive rancheria on Rada Ballena. The largest known cemetery occupies the triangular point of shrub-dotted plain pushing out toward the site of the old rancheria at the base of Punta Tormenta; it comprises perhaps a score of evidently ancient graves, while two newer ones were found on the pebble bar beyond the jacales. When near the pebbly beaches the graves are marked by heaps of pebbles and small cobbles, commonly about the size of those used as hupfs, these cairns being 3 or 4 feet long, two-thirds as wide, and seldom over 12 or 15 inches in height; and most of the cairns are accompanied and enlarged by piles (ranging from a peck to a bushel) of the scatophagic shells already noted. The graves remote from pebbly beaches are marked by heaps of cholla stems and branches, rudely thatched with miscellaneous brambles roughly pinned

¹MS in the archives of the Bureau of American Ethnology. A somewhat more obscure version was recorded by Hale in "The Iroquois Book Rites": "Now, there is another thing we say, we younger brothers. He who has worked for us has gone afar off; and he also will in time take with him all these—the whole body of warriors and also the whole body of women—they will go with him. But it is still harder when the woman shall die, because with her the line is lost. And also the grandchildren and the little ones who are running around—these he will take away; and also those that are creeping on the ground, and also those that are on the cradle-boards; all these he will take away with him." (Brinton's Library of Aboriginal American Literature, number II, 1883, pp. 141-142.)

together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one at Barranca Salina. In general the association of cemeteries and rancherias, or of graves and jacales, indicates that' habitations are usually abandoned for a time when a death occurs within or near them.

The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-south-east of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narragansett, respectively. It is shadowed

by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.¹

On the death of the matron, a grave is scooped out by means of shells

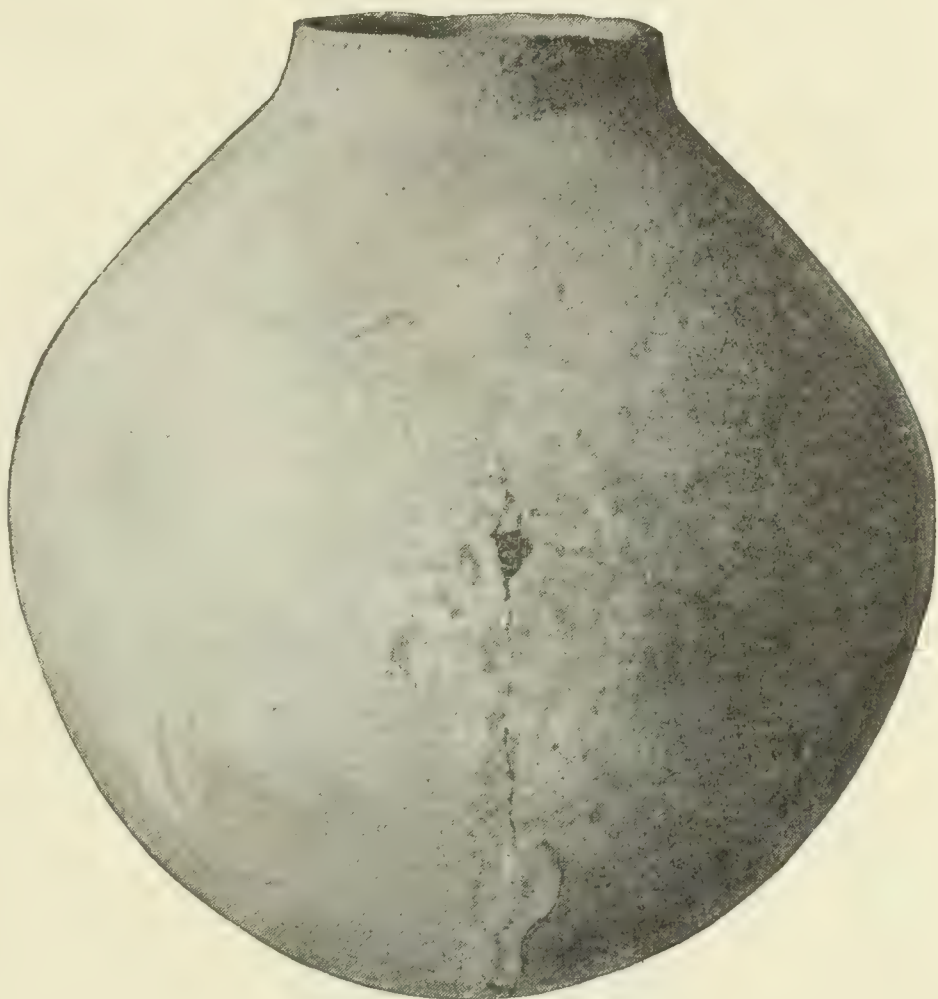


FIG. 39—Mortuary olla.

¹As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 25, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a down-bay gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meantime the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the Sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known aguaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false scents, the principal trail was followed to the well-known Tinaja Anita, 15 miles by the trail from Campo Navidad; and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and saucepans and coffeepots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled taluses and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and cursory notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals and catch scents of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

a few yards from her jacal, preference being given to relatively elevated or commanding points. The excavation is about 30 inches (90 cm.) in depth; within it is placed first the pelican-skin robe of the deceased, so arranged as to fold over the body; then the corpse, dressed in the ordinary costume of life, is compressed into small compass by closely flexing the knees and bringing them against the thorax, extending the arms around and along the lower limbs so that hands and feet are together, and bending the head forward on the chest; when it is deposited in the receptacle in such manner as to lie on the left side, facing north-



FIG. 40—Woman's fetishes.

ward. Near the face is laid a dish of baked clay or a large shell filled with food, and beside it a small olla of water (an actual example is shown in figure 39), while the hupf, awls, hairbrush, olla-ring, and other domestic paraphernalia are placed near the hands. Next the personal fetishes and votive symbols (in the form of puppets or dolls such as those shown in figure 40 *a* and *b*) of the dead mother are slipped beneath the face, and her paint-cup, with a plentiful supply of paint, is added; the poor personal possessions, in the form of shell-beads and miscellaneous trinketry, are then heaped over the face and shoulders, and these are covered with the superfluous garments and miscellaneous

property of the deceased. Finally the pelican-pelt bedding is folded over the body, and two turtle-shells are laid over all as a kind of coffin, when the grave is carefully filled, and the ground so smoothed as to leave no mark of the burial. During subsequent hours the stones for the cairn or the cholla-joints and other brambles for the brush-heap are piled over the spot, while the scatophagic shells are added at intervals apparently for weeks or months and perhaps for years after the burial.

The mortuary food is carefully selected for appropriate qualities (i. e., for "strength" in the notion of the mourners). It comprises portions of

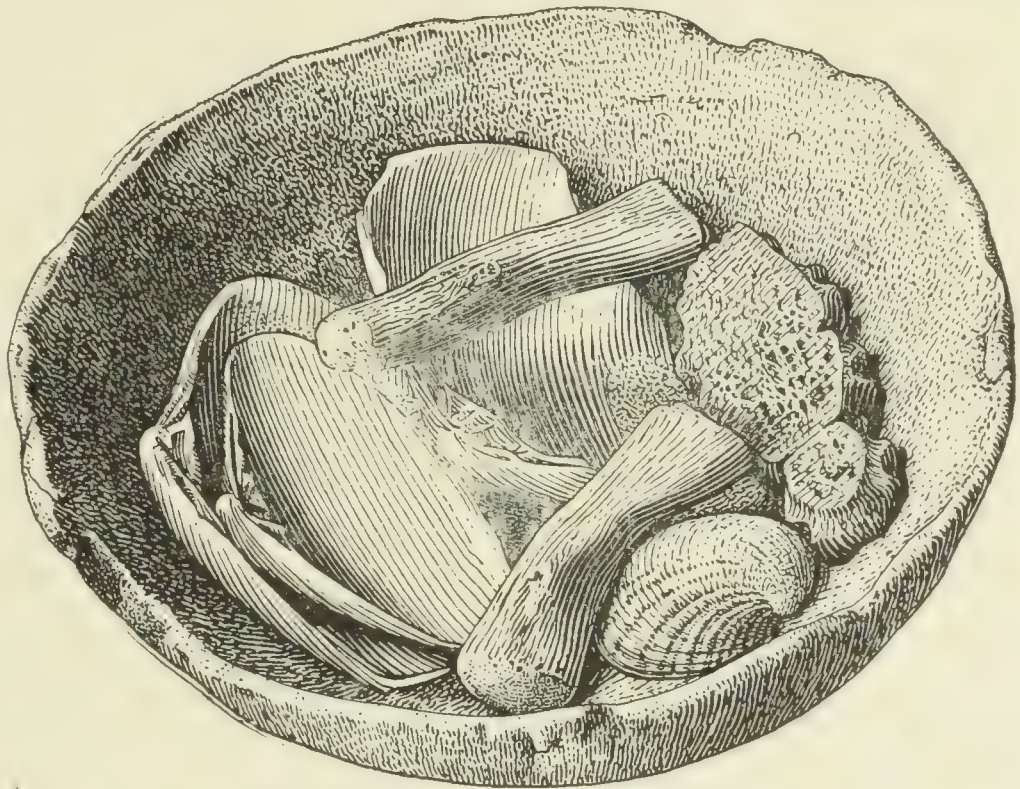


FIG. 41—Food for the long journey.



FIG. 42—Mortuary cup.

features perhaps express that idea of "killing" mortuary sacrifices, ostensibly to fit them to the condition of the deceased, though really (in subconscious practicality) to protect the sepulcher from predation.¹

¹"In all stages of development belief runs a close race against cupidity, and is sometimes distanced; so the sages learn that even a buried weapon may be a source of contention, which they thenceforward forestall by breaking or burning it." (Primitive Trephining in Peru; Sixteenth Ann. Rep., Bureau of American Ethnology, 1897, p. 22.)

Soon after the death (immediately after the burial, so nearly as could be ascertained) there is an apparently ceremonial mourning, in which the matrons of the clan, and, at least to some extent, the warriors also, participate. The mourners wail loudly, throw earth and ashes or ordure on their heads, and beat and bruise (but apparently avoid scarifying) their breasts, faces, and arms. This is continued, culminating daily about the hour of interment, for several days—unless the rancheria is sooner abandoned, in which case the period of formal mourning is shortened.

In addition to the formal mourning of matrons there is a custom of nocturnal wailing after the death of warriors in battle, and, apparently, also, following the death of matrons or nubile maidens, which attracts the notice of frontier rancheros and vaqueros. According to their accounts the first note of lamentation may be sounded at any hour of the night by any of the group to which the deceased belonged; it is successively taken up by other members of the party until all voices are united in a resounding chorus of inarticulate moans, wails, shriller cries, and wild howls, likened by the auditors to the blood-bellowing of cattle; if other groups of the tribesmen are within hearing, they, too, take up the cry, so that the lamentation may extend to the entire tribe and echo throughout practically all Seriland at the same moment. The fierce howling and attendant excitement may rise so high in the group in which the wailing begins that all seem bereft of customary caution; and sometimes they suddenly seize ollas and weapons, and decamp incontinently, perhaps scattering widely and racing for miles before settling again for sleep or watchful guard.

The ideas of the folk concerning death and concerning the relations between the living and the dead are largely esoteric, and are, moreover, veiled by the nonequivalence of Seri expressions with the terms of alien languages.

At least an inchoate belief in a life beyond the grave was intimated by Mashém and his companions at Costa Rica, and their circumspection of speech and mien indicated a strong veneration for, or dread of, the manes; though the specific expressions were connected with deceased matrons, who alone seemed to be prominent in the minds of the clan-mates. So far as could be gathered the belief seems to be that the dead find their way back to the primordial underworld, whence Earth and Beings were brought up by Pelican and Turtle (or Shark) respectively, and are liable to return by night with mischievous intent.

The direct expressions of the Seri informants are fully corroborated by the association of things in interior Seriland. The burial of water and food, of the personal fetishes and votive objects, and of the highly prized face-paint belonging to the dead matron, attests anticipation of a post-mortuary journey; while the temporary abandonment of jacales and rancherias and the nocturnal fears and flights alike betoken

dread of sepulchral visitants. The most suggestive of the associations, i. e., between the scatophagic stores and the sepulchers, awaits full explanation.

SERIAL PLACE OF SERI SOCIALRY

In the conventional seriation of social development four stages are clearly recognizable, viz: (1) Savagery, in which the social organization is based on blood kinship reckoned in the female line; (2) barbarism, in which the basis of organization is actual or assumed consanguinity reckoned in the male line; (3) civilization, in which the laws are based on property-right, primarily territorial; and (4) enlightenment, in which the organization is constitutional and rests on the recognition of equal human rights to life, liberty, and the pursuit of happiness. Now, in terms of this seriation of general culture-stages, the place of the Seri tribe is clear. Reckoning consanguinity wholly in the maternal line, as they do, they belong in the initial stage of savagery. Accordingly they pertain to the lower or more primitive of the two great stages represented by the American aborigines.

A still more refined seriation may be effected through conspection of the several lines of activital development—the esthetic and industrial, and especially the sophic or fiducial, as well as the strictly social; for these lines are most intimately intertwined. Thus, in the Old World, the transition from maternal to patriarchal organization was accompanied, and evidently superinduced, by the development of zooculture into extensive herding; in different districts of the New World, a parallel transition attended the development of agriculture to a phase involving the protection of acequias and fields by armed men; while throughout primitive life, laws are formulated and enforced chiefly through appeals to the superphysical or mythologic. Now, review of the Seri esthetic indicates that the decorative concepts and activities are in large measure inchoate and are practically confined to a single manifestation, i. e., the delineation of totemic symbols primarily denoting zoic tutelaries and incidentally connoting the blood-carriers of clans consecrated to these beast-gods; so that the esthetic motives and devices of the tribe are essentially zoosematic. In like manner a considerable part of the technic of the tribe is zoomimic, as already shown, while even the most highly developed industrial activities occupy the biotic borderland of mechanical chance rather than the characteristic demotic realm of intellectual design. So, too, the faith of the folk is exclusively and overweeningly zootheistic, to the extent that every motion, every thought, every organized action, every law, every ceremony, is shaped with reference to mystical potencies vaguely conceived as a pantheon of maleficent beast-gods; and it is this dark and hopeless faith that gives character to the tribal esthetic and technic. Concordantly the faith finds reflection in the very elements of the social organization; the matron is the blood-carrier and the lawgiver not in and for herself

but as the vicarious and visible exponent of an ever-immanent beast-god—the clan tutelary; her appeals to her brothers for administrative aid are precisely parallel to her intuitive passage from zoomimicry into the field of mechanical chance defined by protolithic implements; and the appeal, like the execution of the law either by herself or by her brothers, is controlled and regulated in absolute deference to the zoic pantheon. Thus, the inchoate tribal laws, expressed in habitual lines of action and modes of thought, are by no means conscious products of human wisdom, but are confidently imputed to a superhuman wisdom on the part of myth-magnified beasts of a mystical olden time; and, similarly, the power of executing these laws is by no means cognized as conscious human faculty, but is faithfully imputed to supernal potencies of mythical monsters. Essentially, therefore, the tribal law is putatively *zoocratic*; and the social organization may justly be classed as a putative *zoocracy*.

To prevent possible confusion, it may be desirable to note specifically that the Seri government is not matriarchal in any proper sense. As pointed out elsewhere, matriarchy is not (at least among the American aborigines) an antecedent of patriarchy, but a correlative of that form of government; and it would be especially erroneous and misleading to designate as matriarchal a tribe like the Seri, whose chiefs and subchiefs (i. e., appellate clan-administratives) are invariably masculine. Neither would it be just, despite the dominance of matrons in legislative and judicative matters, to regard the tribal government as a *gyneocracy*, such as have been noted in various parts of North America—e. g., in Sonora, according to a current tradition as to the origin of the name of the province, and among the Pomo Indians of California, according to Cronise as interpreted by Powers;¹ for the actual control is exercised by the warrior brothers, while the ideal control is vested in that zoic pantheon of which the matrons are putative mouthpieces. Physically and practically the Seri government is an *adelpharchy*, as already indicated; but in the minds of the tribesmen themselves it is an inchoate theocracy putatively headed by a pantheon of animate monsters, whose prelates are personified in the painted clan-mothers.

Summarily, then, the Seri are *zoosematic* in esthetic, *zoomimic* in technic, *zootheistic* in faith, and putatively *zoocratic* in government, while even the Seri tongue is so largely mimetic or onomatopoetic in form as to accord with the industries and institutions; and in view of the intimate interrelations between the several lines of activity, it would seem preferable to determine the culture-status from the coincident testimony of all the lines, but feasible to measure it in terms of any one or more of these activital lines.

Now, on comparing the characteristics of the Seri with those of other known tribes of North America, many resemblances and a few differ-

¹ Tribes of California, pp. 160-161.

ences are found; and practically all of the more conspicuous differences extend in the same direction—i. e., they combine to indicate an exceptionally primitive, or lowly, or zoic, plane for the simple savages of Seriland. Thus, few tribes are so poor in esthetic as the Seri, and in none other are the esthetic devices so clearly and so exclusively zoic; few if any other known tribes so clearly exemplify zoomimic culture; none other so well represents protolithic culture, and no other known tribe is so completely devoid of mechanical devices reflecting higher culture; in general socialry no other known tribe better, or indeed so well, exemplifies zoocracy, while in such special features as those of ethnogamic mating, ceremonial scatophagy, and mortuary magnification of the blood-carriers, the folk mark the most primitive known phase of cultural advancement; and although language and faith yield less definite measure, their testimony is coincident with that of the other lines of activity. Accordingly the Seri must be assigned to the initial place in the scale of cultural development represented by the American aborigines, and hence to the lowest recognized phase of savagery.

Two or three corollaries of this placement are noteworthy: (1) In most of the researches concerning human development conducted by the anthropologists of the world, attention has been given chiefly or wholly to the somatic or biotic characters of *Homo sapiens*; but while various physical features of the Seri suggest bestial affinities (as has been pointed out in an earlier chapter), it is especially significant that the nearest and clearest indications of bestial relationship are found in the psychical features of the lowly folk—for zoic faith in its multifarious manifestations is but a reflection of burgeoning yet still bestial mind.

(2) While human independence of environment culminates in socialry, the interdependence of activital lines so well revealed in lowest savagery demonstrates that institutions and all government necessarily reflect environment; and, at the same time, that the progressive emancipation from environment signalized in the higher culture-grades measures the conquest of Nature through industrial activity—for both the productive work and the attendant exercise cumulatively elevate sapient Man above mindless Nature.

(3) An adjunct of progress in every stage of development, as indicated with especial clearness in the earliest stages, is the annulment or curtailment of both physical and formal law, and the substitution of cumulatively growing volition: the development of the esthetic passes from the intuitive toward the ratiocinative, that of the industrial from the instinctive toward the inventive, and that of the social from the merely reflective to the vigorously constructive; with every pulse of progress the subservience to blind chance and imaginative figment diminishes; and with each increment of sound confidence the ability to surmount physical obstruction and to dispense with primitive formality is cumulatively augmented.

LANGUAGE

The bases for definite knowledge of the Seri tongue are the five vocabularies described on other pages (13, 95, 97, 102, and 107).

The earliest of these vocabularies, comprising eleven terms, was collected in Hermosillo in 1850 by Señor Lavandera, presumably from the tribal outlaw Kolusio, and transmitted to Señor Ramirez for discussion. This pioneer vocabulary is superseded by those of later date.

The second Seri word-collection was made by Commissioner Bartlett at Hermosillo in 1852; it was obtained from Kolusio, and comprises some two hundred words.

The third vocabulary was obtained at Hermosillo during or about 1860, doubtless from Kolusio, by Señor Tenochio; it comprises about one hundred terms; it was discussed and published by Señor Pimentel, and served as a basis for the first scientific classification of the tribe and their collinguals.

The fourth Seri vocabulary was that obtained by M Pinart at Hermosillo in 1879, almost certainly from Kolusio; it comprises over six hundred words, with a few short phrases.

The latest word-collection is the Bureau (or McGee) vocabulary, obtained on the Seri frontier in 1894 through Mashém, subchief of the tribe; it comprises some three hundred vocables with a few short phrases, accompanied by explanatory notes.

The several collections are entirely independent: Lavandera's record was made in Spanish, at the request of Ramirez; Bartlett was not aware of the earlier record, and wrote in English; Tenochio knew nothing of Bartlett's work, was probably not aware of Lavandera's, and wrote in Spanish; Pinart, though French in blood and mother-tongue, was fully conversant with Spanish, in which his record was made, and apparently knew nothing of the earlier vocabularies; while the Bureau recorder had not seen any of the earlier records and had shadowy knowledge of the existence of two of them only at the time of making his own.

Naturally the several vocabularies overlap to a considerable extent, and thus afford means of verification. Those of Bartlett, Tenochio, and Pinart, all obtained from the same informant, are notably consistent, despite the diversity in language on the part of the recorders; and their correspondence with the Bureau vocabulary is hardly less close (except for the comparative absence of terms for alien concepts in the latter record) than their agreement among each other. Accordingly, the linguistic collections, although far less full than would be desirable, are fairly satisfactory so far as vocables are concerned; but unhappily the few short phrases in the Pinart and Bureau collections are quite too meager to elucidate the grammatic structure of the language.

The aggregate number of vocables in the several records is some seven hundred. Of these over 97 per cent are apparently distinctive,

presenting no resemblance whatever to any other known tongue. The remaining eighteen or twenty terms reveal resemblances to Aryan, Piman, Cochimi, or other alien languages; but of these the majority express Caucasian concepts, familiar enough to the outlaw informant, Kolusio, though generally unfamiliar to Mashém and to other actual inhabitants of Seriland.

A critical census brings out six vocables presenting phonetic correspondences with those of one or more Yuman dialects, viz, the terms for tongue, tooth, eye, head, blood, and wood or tree. Now, examination of these terms indicates that the first two probably, and the third and fourth possibly, are associative demonstratives rather of mechanical than of vocalic character—e. g., the terms for tooth and tongue are merely directive sounds accompanying the exhibition of the organs, so that while the terms may not be onomatopoeic in ordinary sense, they are instinctively mimetic or directive, in such wise as to indicate that they may well have arisen spontaneously and independently among different primitive peoples; also that they might easily pass from tribe to tribe as an adjunct of gesture-speech. The term for blood is still more decidedly mimetic of the sound of the vital fluid gushing from a severed artery, or of normal pulsation, so that it, too, must be classed as a term of spontaneous development. The Seri term for wood or tree has an apparent analogue, with somewhat different meaning, in the Cochimi alone; but since the knifeless Seri made practically no use of wood in their aboriginal condition, and since the early Jesuit records show that they sometimes transnavigated the gulf and came in contact with the wood-using Cochimi, it seems fair to assume that material and word were borrowed together. A similar suggestion arises in connection with the term for dog; although the Seri have lived from time immemorial in that initial stage of cotoleration with the coyote in which the adult animals are permitted to scavenge the rancherias, they were without domestic dogs until these animals were introduced into northwestern Mexico by the Spaniards, when they apparently absorbed the animal and its name at once from their eastern neighbors of the Piman stock—presumably the Opata, or possibly the Papago, with both of whom the Seri converts and spies were in frequent contact during the Jesuits' régime at Opodepe, Populo, and Pitic.

In weighing the linguistic relations, it is to be remembered that the Seri are distinctive in practically every somatic and demotic character, that they are bitterly antipathetic to aliens, and that their race-sense is perhaps the strongest known. It is also to be remembered that they are zoosematic in esthetic, largely zoomimic in their primitive industries, putatively zoocratic in government, and overweeningly zootheistic in belief; that nearly all observers and recorders of their characteristics have been impressed by both the distinctiveness and the primitiveness of their speech; that this speech abounds in associative demonstratives and instinctive onomatopes to exceptional degree; that

they class themselves as much more nearly akin to their bestial associates than to any alien tribe or people; and hence that their speech is necessarily zooglossic in considerable, if not unequaled, measure. It is to be remembered, too, that the law of activital coincidences finds fullest exemplification in lowest culture, as has been already shown, and as the zooglossic character of the Seri speech would imply; so that a considerable proportion of fortuitous resemblances might be anticipated. Finally, it is to be remembered that despite the extreme provinciality connected with their unparalleled race-sense, the folk have been in known contact with Caucasian and Amerind aliens for nearly four centuries, and have been steadily, albeit with exceeding slowness, absorbing alien activities and activital products.

In the light of the history and condition of the Seri, a summary of their vocabulary is of much interest. It is as follows:

Known vocables	700±
Distinctive terms	682±
Terms shared with other tongues.....	18±
Terms connoting Caucasian concepts.....	11±
Onomatopes and associative demonstratives.....	5±
Term shared with the Cochimi	1
Term borrowed from the Piman	1
Total	18±
Total.....	700±

On weighing this tabulation, in which no allowance is made for coincidences, it becomes evident that the Seri tongue is essentially discrete. The tabulation, accordingly, justifies and establishes the classifications of Pimentel and Orozco y Berra, under which the Seri, with their collinguals, are erected into a distinct linguistic stock.

Pending further research and the completion of the linguistic collections, it is deemed inexpedient to publish the Seri vocabulary in full, though the material has been compared, analyzed, and arranged systematically as was practicable by Mr J. N. B. Hewitt; and his comparative tables and discussions, which comprise all the terms suggesting affinity with Yuman and other aboriginal languages, are appended. His morphologic analyses and comparisons are especially noteworthy in that they demonstrate that the Seri language is essentially different in structural relations—or in its genius—from the Yuman tongues of neighboring territory.

COMPARATIVE LEXICOLOGY

[By J. N. B. HEWITT]

Serian Material

- A. Seri vocabulary, McGee, W J, entered in Powell's Introduction to the Study of Indian Languages, second edition, in November, 1894.
- B. Seri vocabulary, Bartlett, J. R., printed blank (180 terms), January 1, 1852.
- C. Seri vocabulary, Pinart, A. L., MS. (16½ pp.), April, 1879.
- D. Seri vocabulary, Tenochio, D. A., copied by Pimentel, Lenguas Indígenas de México, t. II, Mexico, 1875.

Yuman Material

- I. Cochimi vocabulary, Gabb, W. M., printed blank (211 terms), April, 1867.
- II. Cochimi vocabulary, Bartlett, J. R., printed blank (200 terms), English and Spanish, subsequent to June, 1852.
- III. Cochimi terms in Clavijero, F. J., Historia de la Antigua ó Baja California, 1852.
- IV. Cochimi vocabulary and texts in Buschmann, J. C. E., Die Spuren der Aztekischen Sprache, Berlin, 1859.
- 1. Avesupai vocabulary, Stevenson, Mrs T. E., MS., Oct., 1885.
- 2. Tonto vocabulary, White, J. B., and Loew, Oscar, MS., 1873-1875.
- 3. Cocopa vocabulary, Heintzelman, S. P., and Peabody, E. T., printed blank (180 terms).
- 4. Maricopa vocabulary, Bartlett, J. R., printed blank (180 terms).
- 5. Maricopa vocabulary, Ten Kate, Dr Herman, MS., May, 1888.
- 6. Mohave vocabulary, Loew, Oscar, printed in Report on United States Geological Surveys west of the One-Hundredth Meridian, Lieut. G. M. Wheeler in charge, vol. VII.
- 7. Mohave vocabulary, Mowry, Sylvester, and Gibbs, Geo., printed blank (180 terms), 1863.
- 8. Hummockhave vocabulary, Heintzelman, S. P., printed blank (180 terms).
- 9. Mohave vocabulary, Corbusier, W. H., entered in Powell's Introduction, second edition, in 1885.
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- 11. Hualapai vocabulary, Renshawe, J. H., and Gilbert, G. K., entered in Powell's Introduction, first edition, 2 copies, in 1878.
- 12. Kutchan vocabulary, Whipple, in Schoolcraft, Historical and Statistical Information Respecting the History, Condition, and Prospects of the Indians of the United States, pt. II, 118-121.
- 13. Kutchan vocabulary, Gabb, W. M., printed blank (211 terms), 1867.
- 14. Diegueño vocabulary, Loew, Oscar, in Report on United States Geological Surveys west of the One-Hundredth Meridian, Lieut. G. M. Wheeler in charge, vol. VII.
- 15. Diegueño vocabulary, Bartlett, J. R., printed blank (180 terms).
- 16. Diegueño vocabulary, Mowry, Sylvester, printed blank (180 terms), 1856.
- 17. H'taäm vocabulary, Gabb, W. M., printed blank (211 terms), 1867.

18. Yavapai vocabulary, Corbusier, W. H., entered in Pówell's Introduction, first edition, in 1873-1875.
 19. Yavapai vocabulary, Gatschet, A. S., MS., 1883.
 20. M'mat vocabulary, Helmsing, J. S., printed blank (211 terms), 1876.
 21. Santa Catalina vocabulary, Henshaw, H. W., entered in Powell's Introduction, second edition, in 1884.
 22. Tulkepayaya vocabulary, Ten Kate, Herman, in Gatschet, Der Yuma-Sprachstamm, Zeitschrift für Ethnologie, Band XVIII, 1886.
 23. Kiliwee vocabulary, Gabb, W. M., printed blank (211 terms), 1867.
 24. Diegueño vocabulary, Bartlett, J. R. (Los Angeles), printed blank (180 terms).
 - 24a. Diegueño vocabulary, Henshaw, H. W., entered in Powell's Introduction, second edition, in 1884.
 25. Santa Isabella vocabulary,
 26. Hawi Rancheria vocabulary,
 27. Mesa Grande vocabulary,
- } Henshaw, H. W., entered in Powell's Introduction, second edition, in 1893.

GENERAL DISCUSSION

The members of a group of languages called Yuman are spoken in a region comprising a part of the peninsula of Lower California, the southern extreme of California, and the western portion of Arizona. In this group of languages ethnologists have hitherto included that spoken by the Seri Indians and their congeners. But the inclusion of this language rests apparently upon evidence drawn from data insufficient in extent and largely imperfect and doubtful in character. In the following pages this evidence is examined, and the conclusion is reached that it does not warrant the inclusion of the Seri tongue in the Yuman group. The same is true with regard to the Waikuri (Guaicuri) language, which has been erroneously, it would seem, included in the Yuman stock; for, judging from present available data, it should remain independent until further research shall decide whether it constitutes a stock in itself or belongs to some other stock.

Moreover, it appears that the principle has been disregarded which requires that, in making lexic comparisons to determine the fact and degree of relationship between one language and another, those vocables having admittedly a common linguistic tradition be carefully and systematically studied before they are juxtaposed to those other terms whose kinship with them is still matter for ascertainment. So comparative lists have been prepared in accordance with this principle.

Now, one of the most important things revealed by the study of language is that the course of anthropic linguistic development has been from the use of polysemantic demonstratives, or what are called pronominate elements by Professor McGee, toward the evolution and differentiation of parts of speech. These vocables, which occur in all languages, are of prime importance in linguistic research because they are chiefly vestigial in character. Presumptively embodying the indefinite thought-clusters of the anthropoid stage in glottic evolution, they project into the speech of the present (the anthropic stage) an outline or epitome of that earlier pronominate plane of thought and speech development. These pronominate elements represent a complex of ideas, comprising person, place, direction, number, time, mode, gender, sex, and case (or relation). In the Iroquoian tongue the pronominate prefix *ra-*, "he", signifies "one person of the anthropic gender, male sex, singular number, nominative case, there, now". Professor McGee in *The "Beginnings of Mathematics,"* speaking of the paramount egoistic basis of the thought of primitive men, well says: "They act and think in terms of a dominant personality, always reducible to the Ego, and an Ego drawn so large as to stand for person, place, time, mode of action, and perhaps for *raison d'être*—it is Self, Here, Now, Thus, and Because."

Now, there are in nature actions, bodies, properties, and qualities requiring definite expression to give clearness and concision to speech, and this need gradually led to the development and use of conceptual expressions resulting in gradual restriction

of the multiplication of, and diminution in the number of, pronominal elements. Speech became specific rather than monophrastic and indefinite, and sought to express individual concepts by terms of definite meaning rather than by phrases involving a plurality of concepts and indefiniteness. The monophrasm or pronominal element expressive of several individual ideas is resolved not by a division of the body of the element, but rather by the addition of elements denotive (though primarily connotive) of action, which had been previously wholly or in part symbolized by the pronominal element, or in part inferred from the situation.

Thus it may be seen that these pronominal elements, miscalled pronouns, are not substitutes for nouns, but that the converse statement is the truer one. These elements have been classed together as forming a part of speech in the same category with the noun and the verb; but it has been seen that the pronominal is not at all a part of speech, involving semantically within itself the distinct concepts of several so-called parts of speech. To make this plain, take from the highly differentiated English tongue the following sentences: "*I* will give *you* to *her*. *What* can it be? The elk is one of the most timid animals *that* walk." In the first, *I*, *you*, and *her* respectively show the relation of the three persons indicated, not only to the act of giving but also to the act of speaking, a function that does not belong to nouns; without change of form they express what is called person, number, case, and sex. And it would be extremely difficult, if not absolutely impossible, to supply the nouns for which *what* in the second and *that* in the third are substitutes; for in the last, not even a noun and a conjunction will answer. Such in part are the concepts for which the pronominal elements stand and which give them such great vitality.

Along with these pronominal elements go the numerals, which were primarily the products of a process of cancellation of common factors from original expressions connoting the required number; and so when once the abbreviated expressions became usual there was no disposition to displace them, and increasing use making them more definite, rendered them more and more permanent. This in brief is the chief cause of the obstinate persistency of numerals in all known languages. An examination of the accompanying lists of number-names will greatly aid in understanding what is meant. The late Professor Whitney, when discussing these elements in the Aryan or Indo-European family, uses the following instructive language:

"When, however, we seek for words which are clearly and palpably identical in all or nearly all the branches of the family, we have to resort to certain special classes, as the numerals and the pronouns. The reason of this it is not difficult to point out. For a large portion of the objects, acts, and states, of the names for which our languages are composed, it is comparatively easy to find new designations. They offer numerous salient points for the names-giving faculty to seize upon; the characteristic qualities, the analogies with other things, which suggest and call forth synonymous or nearly synonymous titles, are many. * * * But for the numerals and the pronouns our languages have never shown any disposition to create a synonymy. It was, as we may truly say, no easy task for the linguistic faculty to arrive at a suitable sign for the ideas they convey; and when the sign was once found, it maintained itself thenceforth in use everywhere, without danger of replacement by any other of later coinage. Hence, all the Indo-European nations, however widely they may be separated and however discordant in manners and civilization, count with the same words and use the same personal pronouns in individual address—the same, with the exception, of course, of the changes which phonetic corruption has wrought upon their forms."¹

And it is on account of the great vitality and persistency of these two groups of vocables that the pronominal elements and the numerals have been given first place in the comparison between the Seri and the Yuman tongues to determine relationship or want of relationship between the two languages.

¹ Language and the Study of Language, New York, 1874, pp. 194-195.

COMPARATIVE LISTS OF SERIAN AND YUMAN PRONOUNS

In the pronominal lists the eight pronominals I, we, thou, ye, he, they, that, and this are compared. The comparison reveals no satisfactory evidence of relationship between the two tongues represented therein. In the list headed "Thou", there is, it is true, a vague resemblance between some of the examples cited; but this is the extent of the agreement among the pronominal elements.

Along with these pronominal lists comparative tables of fifty conceptual terms have also been made. The vocables have been subjected to a discriminating analysis which fails to show any trustworthy evidence of genetic relationship between the Seri and the Yuman languages. These tables will be found at the end of the numeral lists.

The comparative pronominal lists follow:

SERIAN			
<i>I</i>	<i>We</i>	<i>Thou</i>	<i>Ye</i>
B. ive	óve	me	move
C. eve, ivve	ove	me	movve
D. ibe, i, in			
YUMAN			
I. ya	e-é	ba	me-é
II. bu	kélballa	mu	mugutí
2. nyaa	mági	maa	yamakámvi
4. n'yep	b'dowwaánge	man	n'yátches
5. enyip	mateshehámk	mainye	hanyís
7. inyeeippa		mahinye	
8. ainyapi	ainyepi	howanye	ínak
9. inyéte	inyéteabíte	mante	mantcawite
6. iniepa	huateva	manya	
10. anyáa		maa	
12. n'yat		mantz	
13. nyet	nyetchelechaml	manya	koonyemitch
14. inyau	ikhin	nyau	vuyau-khumau
24. n'ya	n'yawaáp	ma	n'yawaáp
16. enyahpah	n'yeahpah	mahpah	
17. nyat	nawot	mat	manyawapa
19. nyät, nía		mät	mad
20. n'ñép		mañ	mandchequedíc
22. nyá	nyaä'		mätche
23. nyapa	panyapa	m'apa	pamaba
15. n'yàpa	n'yawa	m'apa	m'awa

SERIAN			
<i>He</i>	<i>They</i>	<i>That</i>	<i>This</i>
B. imk'	move (for imkove)	imke	ipké
C. imki	imkove	imki	
D. itam		itam	
YUMAN			
I.		kwumba	k'hu
II. ugutá	ugultí	ugutá	yamú
2. ma	bémi, maniûsi	owá	bémi, n'wagi
4. v'dán	awatches	abányim	b'dan

5. sewáinye	hanyís	wedaín	sewaín
6. huványa		hoványe	vitanya
7. mánya	paichsama	kuucha, "What do you say?"	n'yaveoh
8. howanméeme	nayew	howai	howanmiimi
9. huvatce	inyéteawínte	nyanya	viçanya
10. nyuée			viyáa
12. habuitzk			
13. abilkoowan	sakewauk	nyasl	badam
14. it̄cham	kitchámuyú	pú	piyáa
15. pu	pu-wiíptch	pu-witch	p'yà
16.		memuchu	nepte
17. nyip	nyEEP	kooacha	mop
19. net	íet, iät		iät, íet
20. abáñ	s'tubáñ	s'tubáñ	cezáñ, vedáñ
22. yetháha	nihátchewa		
23. hápa	pachawit	nyepat	mihi
24. maís	mawápa	púaisis	piyáís

VOCABULARY LISTS OF SERIAN NUMERALS

The following comparative table of Serian numerals represents all the accessible number-names in existing records of Serian linguistic material. M Pinart records two lists of number-names from "one" to "ten", and says of the first list, "*Quando se cuenta seguido*", for counting consecutively.

It will be of interest to note the fact that the forms of the digit "eight", in the vocabularies of Professor McGee and Mr Bartlett, with the latter's "eighteen", differ wholly from the elements representing "eight" in their terms for "eighty". The term employed by them is recorded by M Pinart in his second list and also by Sr Pimentel. Another peculiarity to be noted in the vocabulary of Mr Bartlett is the fact that for the numbers "thirteen" and "eighteen" he writes the same form. The latter is evidently miswritten, as the two are composed of identical elements. The explanation of this seems to be that in the former there is a subaudition of the element "ten", and in the latter of the element "fifteen".

It is equally instructive to mark the fact that the terms denoting "two, three, four, five" retain or preserve their fuller forms in their multiples, as in "twenty, thirty, forty, and fifty".

The lists follow:

<i>McGee</i>	<i>Pinart</i>		<i>Bartlett</i>	<i>Pimentel (cit- ing Tenochio)</i>
1. tó'χun	tokχom	tashsho	tohom	tasó, tujon
2. ghá'kum	kaχ'kum	kookχ'	kahom	kokjl, kujom
3. pháum	p'χ'ao	kapχ'a	phraom	kupjtku
4. sá'hkūm	shoχ'kum	kshuχ'küă	scochhom	{kosojkl kosojhl
5. kwáetūm	kuaotom	kooχtom	huavat'hom	kouton
6. náhpsūk	napshoχ'	imapkasho	napk'schoch	snapkashroj
7. káhk wūū	kaχkχue	tomkaχkue	kachqhue	tomkujkcui
8. páhk wūū	p'χakχue	kshoχolka	phraque	osrojoskum
9. ksókhūnt	soχanthe	ksovikanlχ'	sohántl	ksobbejoaul
10. khóhnūt ¹	χonalχ'	kanlχ'	honachtl	taul
11.			tantasóque	
12.			tanchltoque	
13.			tanchtaphraqhue	
14.			[tanchltascochhom] ¹	

¹ This form was not recorded by the collector, but has been formed by analogy by the writer.

15.		tanchlhuavat'hom	
16.		tanchlischnapk'schoch	
17.		tanchltumkachqhue	
18.		tanchlphraqhue	
19.		tanchlsovihantlqhue	
20. ũntçkō'k	kanlχ' kookχ'	eanslkoch	taul jaukl
30. ũntçkō'pka		eans'lkapka	
40. ũntçksō'k		eans'lscoch	
50. ũntçkóitum		eanslkovat'hom	
60. ũntçēsñpükü'schōp		eansly'schnapk'schoch	
70. ũntçtüngü'kwü'k		eansltumkachqhue	
80. ũ'ntçkuschohotküm		eanslhschoholchkom	
90. ũntçksegünt		eanslsovikan'tl	
100. ũntçgünt ¹		hiantlkantl	taul taul
200. ũnz-ũ'ntç-kō'k			
300. ũnz-ũntç-kō'pka			
400. ũnz-ũntç-kükschō'k			
500. ũnz-ũntç-kóitum			
600. ũnz-ũntç-ũsnüpükü'schos			
700. ũnz-untç-diũnkwüük			
1000. ũnz-untç kü'nz			

VOCABULARY LISTS OF YUMAN NUMERALS

<i>Kiliwee</i> (23)	<i>Cochimi</i> (I)	<i>Cochimi</i> (III)	<i>Cochimi</i> (IVa)	<i>Laymon</i> (IVb)
1. mesig	1. chaqui	1. tepeeg	1. tejueg (in 5 te- juep) dujven-	1. tejoe
2. hooak	2. kooak	2. goguó	idi, dujuenidi	2. gowac, ka-
3. hamiak	3. kabiak	3. combió		wam, ka-
4. m n o k = “(fingers) down”	4. ichkyum- kooak	4. magacub u- guá	2. goguò 3. kombio, kam- biec, combiec,	moe=“the other”
5. sol-chepam	5. nyaki-vam- pai	5. naganná te- jueg igni-	cambiec	3. kamioec
6. m'sig - elee- pai	6. ichkyum- kabiak	mel=“una mano en-	4. magacubuguà 5. naganna-tejuep	4. nauwi 5. hwipey
7. hooak-eele- pai	7. chaquera- vampai	tera” ¹	=“one hand”	6. kamioec ka- wam=“two three”

¹ “De este número en adelante los mas incultos se confunden y no saben decir mas que: muchos y muchísimos; pero los que tienen algun ingenio siguen la numeracion diciendo: una mano y uno, una mano y dos, etc. Para expresar diez, dicen: *Naganná ignimbal demuejueg*, esto es, todas las manos: para quince dicen las manos y un pié, y para veinte las manos y los piés, cuyo número es el término de la aritmética cochimí. Los que han aprendido el español saben nuestro modo de contar.”

“From this number onward the most ignorant are confused and are only able to say many and very many; but those who have some ingenuity continue the numeration by saying one hand and one, one hand and two, etc. To express ten they say, *naganná ignimbal demuejueg*, that is, all the hands; for fifteen they say the hands and a foot, and for twenty the hands and the feet, at which number ends the Cochimi arithmetic. Those who have learned Spanish know our method of counting.” (Clavigero, *Historia*, etc., p. 22.)

In this citation Padre Clavigero succinctly portrays the cumbersome number series of the Cochimi and other Amerinds of the Californian peninsula. Moreover, the Cochimi terms of Clavigero and those cited from Hervas by Herr Buschmann seemingly suggest a common source of information.

Ducrue (in Murr, *Journal zur Kunstgeschichte*, Nürnberg, 1787, vol. XII, pp. 294) expresses doubt as to the *nauwi* of the Laymon column, not knowing whether it is Nahuatlan or vernacular to the Laymon language. It certainly has an alien aspect. Of Laymonic number names Ducrue says that the Laymon can count singly to five, and then they repeat themselves.

The following citation may be of interest here:

“The Californians know very little of arithmetic, some of them being unable to count further than *six*, while others can not number beyond *three*, insomuch that none of them can say how many fingers

- | | | |
|-----------------|---------------|---------------------|
| 8. ham'ia k - | 8. nyaki-vam- | 10. naganna - iñim- |
| leepai | ivapai | bal - demuejeg |
| 9. m'sigk-tkmat | 9. quachera- | = "all the fin- |
| 10. chepam-me- | vampai | gers" |
| sig | 10. nyavani- | 15. naganna - iñim- |
| 11. mesigk-mal- | chaqui; | bal-demuejeg |
| ha. | "no con- | agannapa = |
| 12. hooak-mal- | tamos mas | "all fingers, |
| ha | adelante." | foot" |
| 20. chepam- | | 20. naganna agan- |
| hooak | | napa-inimbal- |
| 30. chepam- | | demuejeg = |
| hoomiak | | fingers, toes, |
| 40. chepam- | | all" |
| misnok | | |
| 50. mesig quin- | | |
| quedit-sol- | | |
| chepam | | |
| 60. chepamme- | | |
| sig quin- | | |
| quedit me- | | |
| sigelepaip | | |
| 70. chepam me- | | |
| sig quin- | | |
| quedit | | |
| hooak-ele- | | |
| paip, etc. | | |

<i>Mohave</i> (6)	<i>Hualapai</i> (10)	<i>Tonto or Gohun</i> (2)	<i>Diegueño</i> (14)
1. aséentik	sitik	sisi, shiti	khink
2. havik	hovak	uake	óak
3. hamok	hamok	moke	hamok
4. tchungbabk	hobá	hōba	tchibabk
5. harabk	hatábuk	satabé	selkhakai
6. siyinta	tasbek	geshbé	niugushbai
7. viiga	hoágeshbek	hoageshbe	niokhoak
8. muugá	hamúgeshbek	mogeshbe	niokhamuk
9. paaya	halathúig	halseye	nitchibab
10. aráabá	vuáruk	uave	selghiamát
11. aséentik nitauk	sitigiálaga	uave-shiti	niekhin
12. havik nitauk	hovaktiálik	uave-uake	niekhvabgushbaib
20. ará-bavik - tak a-	vavahovak	uake-uave	selghhoák
vuts havík			
30. ará-bavik-tak a-	vavahamok	moke-uave	
vuts-hamók			
40.		hōba-uave	
50.		satabe-uave	

he has. They do not possess anything that is worth counting, and hence their indifference. It is all the same to them whether the year has six or twelve months, and the month three or thirty days, for every day is a holiday with them. They care not whether they have one or two or twelve children, or none at all, since twelve cause them no more expense or trouble than one, and the inheritance is not lessened by a plurality of heirs. Any number beyond six they express in their language by *much*, leaving it to their confessor to make out whether that number amounts to seven, seventy, or seven hundred."—Jacob Baegert, in *Smithsonian Report*, 1864, p. 388.

COMPARATIVE LISTS OF SERIAN AND YUMAN NUMERALS

ONE

<i>Serian</i>	<i>Yuman</i>
A. <i>tó'χun</i> , stem <i>to'χ-</i>	I. <i>chaqui</i> , <i>chaχ'-</i> , or <i>χαχ'-</i>
B. <i>tohom</i> , stem <i>toh-</i> , or <i>toχ-</i>	II. <i>dopí</i>
C. { <i>tokχom</i> , stem <i>tokχ-</i>	24. <i>h'in</i>
{ <i>tashsho</i> , stem <i>tash-</i>	25. { <i>h'in</i>
D. { <i>taso</i> , stem <i>tas-</i>	{ <i>ě'hīnk'</i>
{ <i>tujon</i> , stem <i>tuχ-</i> , "first"	14. <i>khink</i>
	23. <i>mesig</i> , <i>-sig</i> (?)
	7. <i>sayto</i>
	9. <i>seto</i>
	12. { <i>aiséntic</i>
	{ <i>sin</i>
	27. <i>sin</i>
	6. <i>aséntik</i>
	15. <i>shen</i>
	5. <i>shendíb</i>
	20. <i>shéntic</i>
	4. <i>ashentik</i>
	17. <i>shin</i>
	16. { <i>asshin</i>
	{ <i>shin</i>
	3. <i>shitti</i>
	13. <i>sin</i>
	26. <i>ěssin</i>
	8. <i>issintaich</i>
	2. <i>sisi</i>
	19. <i>sísi</i>
	1. <i>sita</i>
	22. <i>sité</i>
	18. <i>síti</i>
	10. <i>sitik</i>
	21. <i>ěsítika</i>
	11. <i>sitta</i>
	III. <i>tejueg</i> , <i>tepeeeg</i>
	IV. <i>tejoe</i> , <i>tejueg</i> , <i>tejuerp</i> , <i>dujuenidi</i> , <i>duj-venidi</i>

In examining the Serian column, it is apparent that the several forms for the numeral "one" are homogeneous, their varying outlines being due to the language of the collector, and especially to the alphabet employed by him. An apparently aberrant form is the *tashsho* (C) and *taso* for *tashsho* (D). The stem of the digit is presumptively *to'χ-* or *tokχ-*; and *tash-* is related to *tokχ-* in the same manner as *duchess* is to *duke* in the English tongue.

The Yuman column is more extensive than the Serian, representing as it does several well-marked dialects. It will be seen that the Diegueño terms for the digit "one" collected by Mr Bartlett (15) and Lieutenant Mowry (16) are evidently from a common stem, while that recorded by Dr Loew (14) is as clearly from a different one. But the Diegueño term (24) obtained by Bartlett near Los Angeles is apparently a modified form of the one obtained by Dr Loew. The two forms (25) obtained by Mr Henshaw at Mesa Grande confirm this view. While these forms apparently differ wholly from the remainder of the Yuman list, yet it seems safe to connect them with the Cochimi digit (I) collected by Dr Gabb. On the other hand, the Cochimi of

Bartlett (II) introduces another term which appears to be kin to the Laymon (III, IV). The remainder of this list presents modified forms of a single vocable, which appears to have been a demonstrative. Compare these with Mohave *asě'ntěnte*, "an other", and *sěnta*, "the other one"; also with the Yavapai *sí'temi*, "an other", and with *děspě-bíka*, "other, the other one".

TWO

<i>Serian</i>	<i>Yuman</i>
A. <i>ghá'kum</i> , <i>ghá'k-</i>	II. <i>goguo</i>
B. <i>kahom</i> , <i>kah-</i> or <i>kaχ-</i>	III. <i>goguó</i>
C. { <i>kaχ'kum</i> , <i>kaχk-</i> <i>kookχ'</i> , <i>kookχ'</i>	IV. <i>gowac</i> (Laymon); <i>kawam</i> ; <i>kamoe</i> , = "the other"
D. { <i>kokjl</i> , <i>kokχ-</i> <i>kujom</i> , <i>kuχ-</i>	22. <i>guwáke</i>
	7. <i>habeeka</i>
	4. <i>habíck</i>
	15. <i>habíck</i>
	20. <i>jubíc</i> (j as in Spanish)
	6. <i>havik</i>
	12a. <i>havick</i>
	9. <i>havíka</i>
	21. <i>hawáka</i>
	12b. <i>hawick</i>
	13. <i>hawik</i>
	18. <i>hěwáki</i>
	5. <i>χawík</i>
	23. <i>hooak</i>
	10. <i>hovak</i>
	3. <i>howōck</i>
	17. <i>howok</i>
	16. <i>howuk</i>
	8. <i>howwaich</i>
	19. <i>huáka</i>
	1. <i>huwaka</i>
	24. <i>h'wach</i>
	11a. <i>hwaga</i>
	25. <i>kawǔ'k</i>
	26. <i>kawǔ'k</i>
	14. <i>óak</i>
	2. <i>uake</i>
	11b. <i>wága</i>
	I. <i>kooak</i>

The Serian examples of the digit "two" are of such phonetic character as to warrant the inference that they are derivatives from a single phrasem of demonstrative origin, the differences in their orthography being due chiefly to the language and training of the collectors and to the difference in the alphabets employed. There is evidently phonetic and sematic relationship between the stem of this digit and the *-kak* in such demonstrative elements as *ish-kak*, "here (where I am), now, then"; *ikχ'-kaka*, "near"; *imk-ahaka* for *imk-kaka*, "there where he, she, is, they are"; *akki-kak*, "whither? to-where? whence?"; *toχ'-kaka*, "far, distant, far off"; and also with *iki* in *akki-iki*, "where?". In these examples the affix *akki-* has an interrogative force. The meaning of *-kak* is that of contiguity or proximity to the Here, the Self.

Now, the fuller Yuman list presents several forms seemingly closely accordant, phonetically at least, with the Serian terms, but these being merely divergent representatives of the distinctively Yuman term which does not accord with the Serian

form, are of no avail to prove relationship. The available material pertaining to this group supplies but scant data for ascertaining the derivation of the Yuman digit. But, in addition to the connection of the Laymon *gowac*, with *kawam*, "the other", it may be that it is permissible to compare here *owá* (2), "that" in Tonto, the Mohave *huvá-nya* (6), "he, that", the Hummockhave *howa-nméeme* (8), "he", and *howai* (8), "that", the Mohave *hura-tee* (9), "he", the Kutchan *habu-itzk* (12), "he", the Kiliwi *hapa* (23), "he", and other terms, which suggest its origin. From the foregoing explanations, there appears to be no lexic relationship between the Serian and the Yuman digits denoting "two".

THREE

<i>Serian</i>	<i>Yuman</i>
A. <i>pháum</i> , <i>phá-</i>	IV. { <i>cambiec</i> <i>combiec</i>
B. <i>phraom</i> , <i>phra-</i> or <i>phχa-</i>	II. <i>combió</i>
C. { <i>p'χ'ao</i> , <i>p'χa-</i> <i>kapχ'a</i> , <i>kapχ-</i>	III. <i>combió</i>
D. <i>kupjtku</i> , <i>kupχ-</i>	I. <i>kabiak</i>
	IV. { <i>kambiec</i> <i>kamioec</i> <i>kombiec</i> } (Laymon)
	23. <i>hamiak</i>
	4. <i>hamóck</i>
	24. <i>hamock</i>
	15. <i>hamók</i>
	6. <i>hamok</i>
	25. <i>hamō'k</i>
	26. <i>hamō'k</i>
	10. <i>hamok</i>
	7. <i>hamoka</i>
	9. <i>hamóka</i>
	3. <i>hamoke</i>
	12. <i>hamóok</i>
	21. <i>hamúka</i>
	22. <i>hamúke</i>
	18. <i>hēmúki</i>
	14. <i>hamok</i>
	17. <i>homook</i>
	8. <i>homuck</i>
	16. <i>hummoke</i>
	1. <i>humuga</i>
	20. <i>jamóc</i> (j as in Spanish)
	5. <i>χamú'k</i>
	11. (ha) <i>moga</i>
	2. <i>moke</i>
	19. <i>móki</i>
	13. <i>mook</i>

The Serian forms of the name for the digit "three" are evidently derivatives from a single term. This vocable appears to be *emahk*, "one-half" (McGee), found also in the name for the middle finger as given by both Professor McGee and M Pinart, the former writing *ñnulte-mũ'ka'p*, and the latter *inol'l'emakkap*, "middle finger". In the Iroquoian languages also, "three" is etymologically "the middle one", i. e., the middle finger, a signification arising from the primitive method of using the fingers as counters in numeration. The middle finger is the third one counting from

either side of the hand. The form *kapχ'a* (C) of M Pinart apparently retains almost unchanged its primitive phonetic outline.

The Yuman list of the dialectic forms of the digit "three" is full and is evidently composed of derivatives from a single source. This parent stem seems to be the attributive *hami*, "tall, long", of the Mohave vocabulary. The form *hamiak* signifies "it is long, tall", and is an appropriate name for the middle finger of the hand. The Kiliwee *hamiak*, "three", still preserves unchanged the phonetic integrity of its component elements. These etymologies fail to develop any lexic relationship between the Serian and the Yuman terms.

FOUR

<i>Serian</i>	<i>Yuman</i>
A. <i>sâ'hkũm</i> , <i>sâ'hk-</i>	8. <i>chaimpap'k</i>
B. <i>scochhom</i> , <i>scochh-</i>	12. <i>chapóp</i>
C. { <i>shoχ'kum</i> , <i>shoχ'-</i>	24. <i>chepap</i>
{ <i>ksuχ'küă</i> , <i>ksuχk-</i>	7. <i>choompapa</i>
D. { <i>kosojkl</i> , <i>kosoχk-</i>	13. <i>ch'pap</i>
{ <i>kosojhl</i> , <i>kosoχh-</i>	17. <i>ch'pop</i>
	4. <i>chumpáp</i>
	15. <i>chumpáp</i>
	16. <i>chupop</i>
	20. <i>chuumpáp</i>
	3. <i>s'pap</i>
	5. <i>styumpáp</i>
	26. <i>tcăpáp</i>
	14. <i>tchibabk</i>
	6. <i>tchungbabk</i>
	9. <i>tcimpápa</i>
	2. <i>hôba</i>
	10. <i>hobá</i>
	11. <i>hoopbá</i>
	1. <i>hópa</i>
	18. <i>hopá</i>
	19. <i>hópa</i>
	21. <i>hopá</i>
	22. <i>hupá</i>
	I. <i>ichkyum-kooak</i> , (=iχ'kium-kuak)
	II. <i>maga-cubuguá</i>
	III. <i>maga-cubuguá</i>
	23. <i>mnok(?)</i> , "(fingers) closed, lying together"
	IV. <i>nauwi</i> (Laymon)

The Serian examples of the digit "four" are evidently mere variants of a common original, the derivation and signification of which the meager linguistic material at hand seems not to supply. In no manner do these forms accord with those of the Yuman list below, thus barring any inference of relationship.

The Yuman list presents apparently only three different terms for the digit "four". Without the means of obtaining even a partially accurate view of the historical development of such a form as the Mohave *chaimpap'k* (8), it is nevertheless instructive to compare it with the Cochimi *ichkyum-kooak* (I), the literal meaning of which is "two repeated". This apparently gives a clue to both the derivation and signification of the Mohave term. The initial *chaim-* is seemingly a modified form of the prefix *ichkyum-*, signifying "repeated, again, iterated". If this identification be correct, as it certainly seems to be, then the final *-pap'k* is the duplicated

form of the numeral "two", the variants of the stem of which are as follows: *hub-*, *hob-*, *hav-*, and *hab-*. This *chaim-* changes to *cha-*, *che-*, *choom-*, *chu-*, *chuum-*, *styum-*, *teim-*, *tchi-*, *ch'-*, *s'-*, and *tchung-*, while *pap'k* appears as *pop*, *pap*, and *papa*. The next stem is that of the Tonto *hóba* (2), which is apparently cognate with the verb *hobam*, "to set, lie down", like the sun and moon, referring to the fact that when the fingers are "all lying down" the count is "four". The following six terms are apparently cognate with this Tonto form. The Cochimi (I) has already been mentioned. Its final *kooak* is the numeral "two", and the prefix, as explained above, signifies "repeated, again, iterated". The next two forms (II) and (III) are apparently composed of the iterative, or rather additive, prefix *maga-*, "added, over", and a form of the Cochimi numeral "two", *goguò*. The Kiliwi *mnok* signifies "lying together, closed", as the fingers, thus approximating in sense the Tonto *hóba*, above.

FIVE

<i>Serian</i>	<i>Yuman</i>
A. kwáetūm, kwáe-tūm	8. hairrap'k
B. huavat'hom, kora-t'hom	6. harabk
C. { kuaotom, kuao-tom	22. herápe
{ kooχtom, kooχ-tom	18. hērā'pi
D. kouton, kou-ton	10. hatábuk
	11. hûtápa
	2. satabé
	IV. hwipey (Laymon)
	II. muguacogüi
	III. naganná tejueg ignimel = "one whole hand"
	IV. naganna tejuép = "one hand"
	I. nyakivampai
	9. çarhápa
	7. tharrapa
	4. saráp
	5. saráp
	13. sarap
	15. saráp
	17. sarap
	24. sarap
	20. saaráp
	16. sarrap
	14. selkhakai
	12. seráp
	21. seräpa
	19. sarápi
	23. sol-chepam
	3. s'rap

The several forms of the Serian numeral "five" appear to be derivatives from a common original. There seems to be no doubt that it is a compound expression, meaning "one full, complete (hand)". The final *-tūm*, *-t'hom*, *-tom*, and *-ton* are evidently forms of *tó'χun*, *tohom*, *tokχom*, meaning "one", while the initial *kwáe-*, *huava-*, (*kora-* in "fifty"), *kooχ-*, and *kou-* are apparently derived from the term *kov'*, occurring in *ishshaχ' kov'*, "full, complete moon".

In the Yuman list, however, there are several different stems employed to designate the digit "five". The forms *sarap*, *seráp*, *harabk*, and *hairrap'k* are clearly variants of a single original. Its literal signification, however, is not so evident, but from the data at hand the inference is warranted that it signifies "entire, whole, complete". In the Mohave of Dr Corbusier *hi-sal koçarāpa* signifies "the

whole hand", and "fingers", *koṣaṛāpa* being also written *kothaṛāpa*. Now, *hi-sāl* means "his hand", and *koṣaṛāpa* or *kothaṛāpa* would soon lose its initial *ko-*, from the wear to which it is subjected. In *hatábuk*, *hútápa*, and *satabé* a new stem is to be recognized; it signifies "to grasp", or rather "grasps", and is found in *aauwa sataba*, "fire-tongs", in which *aauwa* means "fire" and *sataba* "to hold, take hold". The reference here is to the clasped hand as signifying the digit "five", because in counting the fingers are bent down upon the palm of the hand, the result being a closed or clasped hand. Now, in *selkh-akai* and *sol-chepam*, a form of the usual *sāl*, "hand", occurs, and *-akai* and *-chepam* have presumptively a signification semantically equivalent to *koṣaṛāpa* and *sataba* in the preceding Yuman examples, but the meagerness of the material at hand prevents the setting forth of the data necessary to prove this conjecture; yet it may be stated that if the term "hand" is a constituent element of the name for the digit "five", it is because of the fact that the fingers and the thumb thereof are in number "five", so that "the entire hand, the whole hand, the complete hand", may become the name for the digit "five". Hence, when the word hand is an element of the name thereof, as it is in the present instance, it is presumptively certain that some word like "entire, complete, whole, clasped, bent down", must form the other element of the compound. The Cochimi (II) *muguacogüi* is seemingly a combination of *mugua* for the cognate *humuga*, "three", and *cogüi* for *goguó*, "two". And the Cochimi (I) *nyakivampai* is a compound of *gi-nyak*, "hand", [*mi-nyak*, foot], and some element denoting the completion of the count of the digits of one hand, *-i-vampai* or *vampai*. The Cochimi (III) and (IV) are self-explanatory, *naganna*, signifying "hand", while Laymon (IV) is not explainable from the accessible data. These analyses fail to show genetic relationship between the two lists, in so far as the digit "five" is concerned.

SIX

<i>Serian</i>	<i>Yuman</i>
A. nahpsūk	2. geshbe
B. napk'schoch	3. hamhoke
C. { napshoχ'	13. hoomahook
{ imapkasho	17. hoomahook
D. snapkashroj	15. humhōek
	16. humhoke
	12. humhóok
	24. humhock
	4. humhóque
	20. joumjóc (j as in Spanish)
	5. χemχúk
	I. ichkyum-kabiak
	IV. kamioec kawam = 2 x 3
	8. maike-sin-kenaich
	23. m'sig-eleepai
	14. niu-gushbai
	25. kumhōk
	26. kŭmhok
	7. seeinta
	9. siínta
	6. siyinta
	18. dě-spé
	10. ta-sbe-k
	19. tē-shbé
	21. te-shpě'-k
	22. te-zpé
	11. tū-spě'
	1. tii-rspe

The given forms of the Serian digit "six" are evidently mere variants of a common original, which seems quite naturally to have been composed of the stem *-apka* of the numeral "three", and of both a prefix and a suffix. The prefixes, for there are two, are, to judge from the one in *imapkasho*, demonstrative in character. It may be compared with *im-* in *imk'*, "he"; *imke*, "that"; *imkore*, "they"; *imki*, "that", in which it appears to be a directive prefix. And the initial *n-* and *sn-* may be cognate in origin. But the final *-sūk*, *-schoch*, *-shoχ'*, *-sho*, and *-shroj*, according to the audition or otosis of the collector, must mean "repeated, doubled, again", etc, or an equivalent. Hence, the Seri number "six" would be literally "three repeated".

In the Yuman column at least eight different elements are involved in the formation of the digit "six" in the several dialects of the group. The digits "two" and "three" compose the larger portion of the forms, resulting in such outlines as *hamhoke*, *hoomahook*, *humhoke*, *humhóque*, *χemχúk*, *kumhok*. *Hamok* (10), "three", is a characteristic form of this digit, and *hooak* (23), *habíck* (4), and *huáka* (19), *óak* (14), *uake* (2), are characteristic outlines of the digit "two". Compare these two lists. The final *-k* of the numeral "three" is elided in composition, as it is merely a predicative element, as has been indicated in discussing the Yuman digit "three"; hence, *ham-* or *hum-*, symbolizing "three", with the suffixion of such forms as *hooak*, *huáka*, or *uake*, "two", readily becomes *humhoke* or *hamhoke*, literally "two threes". In such forms as *geshbe* (2), *despé* (18), and *niugushbai* (14) there occurs a common element *-shbe*, *-spé*, or *-shbai*, which evidently signifies "added, over, plus", just as *-eleepai* does in *m'sig-eleepai* (23), "six", literally "one added, one more than". The *ge-* or *-g-* in (2) is evidently the final *g* of the Kiliwi form of the numeral one, *mesig*, *m'sig*, which may have at one time been the digit "one" in the Tonto (2); so that *geshbe* or *g-eshbe* stands for an earlier *měsig-eshbe*, "six", literally "one added (to five)". The term *de-spé* is evidently a contracted form of *siínta-spe*, "one added", as the other similar forms show. Compare *ta-sbe-k* (10) and *siínta* (9) and *siyinta* (6), in the last two of which the suffix is wanting or at least overlooked by the collector. In *ichkyum-kabiak* (I) the digit *kabiak*, "three", occurs, so that *ichkyum* must mean "repeated, again, iterated", just as it was shown in the remarks on the digit *four*. Now, the form *maike-sin-kenaich* is, perhaps, an ordinal and not a cardinal. The initial *maike-* signifies "more, over, added, plus", the final *-kenaich* is the doubtful part, and the middle portion *-sin-* is a contracted form of *sinta*, *siínta*, "one", as may be seen in the list of the Yuman forms of the digit "one". One other form remains to be considered. The Diegueño (14) of Dr Loew has *niu-gu-shbai* (the syllabication is the writer's, showing the elements of the combination). An examination of the digits "seven", "eight", and "nine" reveals the fact that the initial *niu-* has the value of "added, over, plus, in addition to", five. But it has been seen that the ending *-shbai* has a like signification. The only reasonable explanation of this anomaly is that like the Tonto (2) *g-eshbe*, it owes its origin to the term represented by the Kiliwi *měsig*; and, moreover, it seems to be a dialectic loan-word. If the term *geshbe* (2) was adopted as meaning *six*, supplanting, it may be, an earlier form like *hamhoke*, the force of analogy, to assimilate this to the other forms, namely, of "seven", "eight", and "nine", would affix the regular dialectic prefix *niu-* (or *nio-*). These explanations and analyses of the diverse forms of the numeral "six" reveal no relationship between the Serian and the Yuman groups.

SEVEN

Serian	Yuman
A. <i>kahkwuu</i>	22. <i>hawake-zpé</i>
B. <i>kachqlhue</i>	18. <i>hěwakě-spé</i>
C. <i>kaχkχue</i>	10. <i>hoáge-shbe-k</i>
<i>tomkaχkue</i>	2. <i>hoage-shbe</i>
D. <i>tomkujkeui</i>	19. <i>huáké-shpě</i>
	11. <i>hwag-spě</i>
	<i>hwagú-spě</i>

1. waka-spe
23. hooak-eleepai
8. maik-kewikenaich
14. nio-khoak
20. paajkék
13. pahkae
17. pahkai
5. paχkyèk
21. pakai
24. pakai
3. pakha
16. parkai
4. patchkieque
12. pathcayé
- I. chaquera-vampai
7. bee-eeka
9. víka
6. viiga

It is evident that the forms of the Serian digit "seven" are variants from a common source, and it is equally apparent that the numeral "two" is the basis for the term. The several examples of this numeral are *ghá'kum*, *kahom*, *kaχ'kum*, *kookχ'*, in which the final *-um* or *-om* appears to be a suffix; in the term for "twenty" Professor McGee writes *ǎntçkō'k*, in which the final *-kō'k* is the term denoting "two", and in which the final *-um* or *-om* is wanting, which probably indicates that it is a flexion. Now, it is seen that this numeral "seven" terminates in the syllable *-wūū*, *-ue*, and *-ui*, in direct contrast with the termination of the digit "two". The material at hand is too limited to determine whether this final syllable should be *-wūū*, *-ue*, *-ui*, or *-kwūū*, *-kue*, *-kui*. It apparently signifies "added, over, plus", or some equivalent term. To attain economy of utterance the term denoting "five" was omitted from the original statement, "two added to five", as the expression of the number seven, and so "two added" became the name of the number "seven". An initial *tom*, *tum*, *tūn*, or *diūn* occurs in the names for 7, 17, 70, and 700. An evident derivative from the name for "hand", it denotes "five". It is a cognate of *ǎnt* in *ksókhǎnt*, "nine", literally "four-five", and also with *tanchl* in Mr Bartlett's numbers 12-19; the correct form for "seven", it would seem, should have been *tan'ł kaχkue*, etc, "five-two-added-on"; its initial *t* is identical with the *t* in *t-aul* (*t-aul*?), "ten". The difference in the endings of this prefix—the difference between an *m* and an *n*—may easily be explained. In the several vocabularies it is seen that one collector fancied he heard an *m* sound, while another, equally careful, heard an *n* sound. The fact appears to be that it is an obscure nasal sound, which may readily be taken either for an *m* sound or an *n* sound by the heteroglot. In Bartlett's list of numerals *tan-tasó-que* signifies "eleven", wherein *tasó-* is the numeral "one", as given by both M Pinart and Sr Tenochio, *tan-* the prefix under discussion, and *-que* the suffix mentioned above, which was regarded as signifying "added, more, plus".

The first eight terms of the Yuman list are clearly modified forms of a single original combination, which is apparently still retained nearly unchanged in the Yavapai (18) of Corbusier, *hěwakě-spé*. The signification and function of the final *-spé* have been discussed in the remarks on the probable derivations and meanings of the Yuman names for "six". The given conceptual element is evidently the term *hěwakě*, "two". And *-spé*, as has been ascertained, signifying "added, more, plus", etc, the expression literally means "two added", i. e., to five, which is here understood, but unnecessary, since "two added" has acquired the meaning "seven", originally expressed by the entire proposition. The Kiliwee (23) term *hooak-eleepai*, "seven", has literally the same meaning as the terms last under discussion. It will be seen that the conceptual element is the term *hooak*, "two", which is only another form

of *hwakē*, treated above. Now, it is mathematically certain that if "two" be an element of the concept "seven", it must be *added* to some preceding number that will produce the result sought, and this number is of course five. So it is presumptively certain that the element *-leepai* must mean "added, laid onto, superadded, subjoined". The Hummockhave (8) *maik-kewik-enaich* is composed of the conceptual element *kewik*, "two", the prefix *maik-* meaning "more, over", and the suffix *-enaich* (or *-kenaich*), which seems to be an ordinal or distributive flexion. So that "two over, added", is here likewise the expression for the numeral "seven". The next form, the Dieguño (14) of Dr Loew is another example of the use of the numeral "two" with different flexions, to express the number "seven". An examination of this Dieguño list of numerals shows that in such a form as *nio-khoak*, "seven", the initial *nio-* is a prefix signifying "added, in addition to", etc, while the *khoak* is a form of the numeral "two". The next ten forms, while apparently derivative from a common source, are difficult of explanation from the material at hand. The same may be said of the last four, three of which are evidently cognate and are very probably shortened forms of the original represented by the first group in the list. Take, for example, a form like (22) *hawake-zpé*, and drop the final *-zpé*, as is done in some of the terms in the "eight" list, and also the initial *ha-*, and the result is a form *wake*, which in the dialects (6) and (9) would become *viiga*, *vika*, which is the form of the digit "two" in these dialects. The form (7) *bee-eeka* is also merely the digit "two" of this dialect without any index to show that it is not "two" rather than "seven". The same thing is to be noticed in the Serian lists, in which the form for thirteen is in all respects the same as that for the numeral "eighteen", both apparently meaning merely "three added".

EIGHT

Serian	Yuman
A. páhkwūn	23. <u>h</u> amiak-leepai
B. phraque	10. hamúge-shbe-k
C. $\left\{ \begin{array}{l} \text{ksho}\chi\text{olka} \\ \text{p'}\chi\text{ak}\chi\text{ue} \end{array} \right.$	22. hamuke-zpé
D. osrojoskum (osχ'oxoskum?)	18. hēmukē-spé
	11. hmaga-spe
	1. humuga-spe
	2. moge-shbe
	19. múkē-shpē
	9. móka
	7. moo-ooka
	6. muugá
	16. chip-hoke
	12. chip-hók
	21. hipp-óka
	3. sep-hoke
	13. seepa-hook
	4. sepp-óque
	5. sep-χúk
	15. sepp-ôck
	17. shepa-hook
	20. siip-jóc (j=χ)
	25. tcēp-hōk
	26. tcēp-hōk
	8. maike-homok-enaich
	14. nio-khamuk
	24. pakai-hin-awach
	I. nyakivamivapai

The Serian numeral "eight" is expressed by two different terms. The first is based on the numeral three, and the second on the digit four. The former is the remaining factor of an original expression which signified by uttered elements "three added to five (=the full hand)", but the need for economy of expression led to the suppression of the uttered element denoting "five", as soon as the shorter "three added" acquired the usual signification of "eight". The basis of the digit is *kō'pka* or *kapχ'a*, "three", with the suffix *-kwūū* (*-kχue*, *-que*), presumably denoting "added, plus". This represents the usual method of forming this digit. The second term, *kshoχolka*, is that which is presumably based on the numeral "four". This is the form given by M Pinart. But Sr Pimentel, citing Sr Tenochio, writes this *osrojoskum*, which at first sight appears to be quite different from the other; yet the *r* of the latter evidently stands for a modified *χ* and the *j* for a *χ*, and making these substitutions the term becomes *osχ'oχoskum*, which is approximately the form in which Professor McGee and Mr Bartlett wrote this digit in the numeral "eighty". Now, it is self-evident that if the element "four" constitute a factor in the combination denoting "eight", it must be added to itself by addition or multiplication, and the result will be the same in either event. The final *-olka* appears also as *-otkūm*, *-olchkom*, and *-oskum* in these Serian vocabularies, either in the numeral "four" or its multiples. The origin and signification of this ending are not clear; but taking into consideration the great variations in the spelling of its recorded forms, especially in so far as the consonant sound preceding the *k*-sound is concerned, it may not be presumptive to adopt the *s*-sound (though *sχ'* may be more correct) as that which represents approximately at least the true sound, for it varies from *l*, *t*, *lch*, to *s*. And it has been seen that the final *-um* is a flexion denotive of serial or consecutive counting and so not a part of the stem. Then it is seen that *-s-k-* (the last two hyphens representing uncertain vowels) is the termination requiring explanation. Now, it is probable that this termination is identical in meaning and origin with the *-sūk*, *-shoχ*, *-sho*, *-schoch*, and *-shroj* (= *-shχ'oχ*) terminating the forms of the digit "six". If this identification be correct (and there is no present reason to doubt it), it signifies "repeated, again, duplicated", as was suspected and stated in the discussion of the forms of the numeral "six". So granting this derivation to be correct, *kshoχolka*, then, signifies "four repeated", which of course denotes "eight".

In the Yuman list, the first eleven forms are evidently composed of the numeral "three" and a suffix signifying "added, plus, more than", but the last three of the group want this suffix, a fact due perhaps to the fault of the collector rather than to linguistic development. The terminations *-eleepai* and *-shbe-k* and its variants have already been explained when treating of the numeral "seven". And the twelve forms beginning with *chip-hoke* (16) are variants from a common original composed of the numerals "two" and "four". It will be readily seen that *chip-* in such a form as *chip-hoke* is a contraction of a form such as *tchibabk* (14), "four", *chepap* (24), "four", as may be seen in the Yuman list of terms for the digit "four". Now, the next portion of the term is *-hoke*, which is but a slightly disguised numeral "two", as may be seen by reference to the schedules of the numeral "two". Compare *hooak* (23), *huáka* (19), *uake* (2), and *hěwáki* (18), all signifying "two". Now, the next term, *maike-homok-enaich* (8), is a combination of *maike*, "above, over, more than", *homok*, "three", and the ending *-enaich* (or *-kenaich*), which may be either an ordinal or a distributive flexion. The form *nio-khamuk* (14) is a combination of the prefix *nio-*, signifying "added, above, or more than", and the conceptual term *khamuk*, "three", the expression signifying "three over, or added to". The next two examples are evidently irregular, if not spurious. The form *pakaikhin-awach* is composed of *pakai*, "seven", *khin-*, "one", and the suffix *-awach*, "added to". Now, the last, the Cochimi *nyaki-vamivapai*, appears to be erroneous. It contains the term *nyaki* for *ginyaki*, "hand", but the remainder of the expression is composed of elements that are not comparable to anything in the meager material at present accessible. The Serian and the Yuman terms herein show no relationship.

NINE

Serian	Yuman
A. <i>ksókhünt</i> , <i>ksókh-ünt</i>	9a. <i>hailyuthu</i>
B. <i>sohántl</i> , <i>soh-ántl</i>	1. <i>halathuya</i>
C. <i>soxanthé</i> , <i>sox-anthé</i>	11. <i>halathúya</i>
C. <i>ksovikanlχ</i>	10. <i>halathúig</i>
D. <i>ksobbejoaul</i> (<i>j=χ</i>)	22. <i>halesúwi</i>
	19. <i>halēsúyi</i>
	2. <i>halseye</i>
	18. <i>húlēthúyi</i>
	3. <i>hamhinmoke</i>
	13. <i>hoōmhoomook</i>
	17. <i>hoomhoomook</i>
	15. <i>humhum móck</i>
	4. <i>humhum móque</i>
	12. <i>humbamóok</i>
	21. <i>hūmhummúka</i>
	20. <i>jumjamúc</i> (<i>χumχamúk?</i>)
	5. <i>χemχemúk</i>
	8. <i>muke</i>
	16. <i>n'yimhummoke</i>
	26. <i>nīmhum mōk</i>
	23. <i>m'sigk-tkmat</i>
	14. <i>nitchibab</i> , (<i>ni(o)tchibab</i>)
	6. <i>paaya</i>
	7. <i>paeeya</i>
	9b. <i>páia</i>
	1. <i>quachera-vampai</i>

The first three Serian terms for "nine" are evidently forms of a common original, signifying "four added to five". It is evident that *ksō'kh-* in (A) *ksō'kh-ünt* is the same element as *-ksō'k* in *ūnçtksō'k*, "forty", and *-kschō'k* in *ūnz-untçkūkschō'k*, "400". The element *-ünt* here is a name for "five". Its literal meaning is "hand", which may be gathered from the following citations: *ūnol'k* = "hand"; *mī'noūl't* = "arm"; *ūnulte-mū'ka'p* = "middle finger", in which *ūnulte* means "finger (or hand)". These are from the vocabulary of Professor McGee. Then M Pinart records *innolχ'*, "arm", *intlāsh* "hand", *inol'tis*, "finger, index finger", *inol'tip* "ring finger". And Mr Bartlett writes *inoyl*, "arm", *inossiskersk*, "hand", *inossack*, "fingers". This *-ünt* will be further treated when the numeral "ten" is under discussion.

While it is evident that the first eight forms of the Yuman list are but variants from a common original, it is not, however, so clear what the original signification of the combination was. But as there can not be any question of relationship between these and the Serian terms, this fact will not affect the result of this study. The next terms of the Yuman list are variants of an entirely different combination of elements. The forms (15) *humhum-móck* and (12) *humhamóok* may be taken as characteristic of these terms. Now, it is plain that there is here duplication of the stem *hum-* or *ham-*, "three", making the literal sense of the combination to be "three threes", which of course gave the required meaning. The Cochimi (23) *m'sigk-tkmat* contains the element *m'sig*, "one", and the final *tkmat*, which appears to mean "lacking, wanting, or less". And in the Diegueño (14) *nitchibab* for *niotchibab* a still different method of expressing "nine" is found. In discussing the numeral "seven" and "eight" the signification of the initial *nio-* was ascertained to be "added to, over, plus", and *tchibab* is of course the numeral "four". The original expression, then, was "four added to five", producing the required number, "nine". The next three forms, though evidently cognate, are, like the first group, not analyza-

ble from the data to be obtained from the meager material at present accessible. The last form is doubtful. These analyses show no relationship between the Serian and the Yuman terms.

TEN

<i>Serian</i>	<i>Yuman</i>
A. <i>khóhnüt'</i> , <i>khóh-nüt'</i>	6. <i>aráabá</i>
B. <i>honachtl</i> , <i>ho-nachtl</i>	9. <i>arháp</i>
| <i>χonalχ'</i> , <i>χo-nalχ'</i>	7. <i>arrapa</i>
C. | <i>kanlχ'</i> , <i>ka-nlχ'</i>	8. <i>raphawaich</i>
D. <i>taul</i> (<i>tanl?</i>)	18. <i>buwáwi</i>
	1. <i>huwava</i>
	19. <i>uábi</i>
	2. <i>nave</i>
	11. { <i>uwawa</i>
	(<i>h</i>) <i>wáwa</i>
	10. { <i>varuk</i>
	<i>vuáruk</i>
	22. <i>wáwe</i>
	3. <i>sahhoke</i>
	12. <i>sahóohk</i>
	21. <i>sahóka</i>
	13. <i>sauhook</i>
	15. <i>shahôck</i>
	20. <i>shahahjóc</i> (<i>j=χ</i>)
	4. <i>shahóque</i>
	5. <i>shaχúk</i>
	16. <i>sharhoke</i>
	17. <i>shauhook</i>
	14. <i>selgh-iamát</i>
	23. <i>chepam-mesig</i>
	III. <i>naganna ignimbal demuejueg</i> = "to- <i>das las manos</i> "
	I. <i>nyavani-chaqui</i>

The Serian forms of the numeral "ten" are apparently cognate, being composed, it would seem, of the same elements. Thus they are mere variants of a common original expression, signifying, literally, "two fives", or what originally was the same thing, "two hands".

The element *khóh-* in (A) *khóhnüt'* represents *ghá'k* (*kha'k*) or *kō'k*, as it is also written, signifying "two", and *-nüt'* is the slightly disguised name for "hand" and "finger", being also transcribed as *-nachtl*, *-nalχ'*, *-nlχ*, and lastly *-aul*. Compare these carefully with the words denoting "arm, hand, finger", in this language, and it will be seen that the spelling of *khóh-* varies in the several vocabularies from *khóh-*, *ho-*, *χo-*, to *ka-*, respectively. The derivation of the *t*, or rather *tă*, in *taul* of Sr Tenochio, is not evident, but seems to be cognate with the prefix *tom-*, *tum-*, *tăn-*, or *diăn-*, already noticed, making *taul* thus signify "five added", i. e., to five, and so producing "ten units". Such seems to be the evident resolution of the Serian names for the numeral "ten". But *taul* may have been miswritten for *ta-an'l*.

The first four terms of the Yuman list are plainly based on the numeral "five", expressed by *sarap*. The form *raphawaich* (8) is evidently a shortened form of *sarap-howwaich*, literally "two fives", or, what was the same thing at the beginning, "two hands". The first term, *sarap*, signifies "five, finger", denotively, but its literal or connotive signification is "entire, whole, full, complete, collectively", a meaning which was suggested in the discussion of the numeral "five". And *howwaich* is the form of the digit "two" in this dialect.

The next nine forms are so contracted, irregular, and, perhaps, miswritten that an analysis of them is a matter of doubt and difficulty, but the following ten terms are cognate and signify "two fives (hands)", or, denotively, "ten". In the comparative list of names for the "arm, hand, finger", etc., *shah*, *shawas*, *shawarra*, and *eesarlya* are a few of the many variants of *säl*, "arm, hand, finger", etc. So, in such a form as *sahhoke* (3) the *sah* is the name for "hand" and *hoke* is the numeral "two", the combination signifying "two fives, hands", or "ten". The other nine terms are but variants of the original of this compound. In *selgh-iamát* (14), *selgh* for *isalgh* is the element denoting "hand", or "five", while *iamat* means "added to, upon, over", there being the subaudition of the element denoting "five". Hence the original combination meant "five added to five", or "ten". This is a strict application of the quinary system.

The Kiliwee term *chepam-mesig* (23) signifies literally "one *chepam*". If reference be made to the "five" list, it will be seen that there *sol-chepam* signifies "five", or, to be exact, is the translation of the term "five". Now, the element *sol-* of this compound is a variant of *esal*, "hand", while *chepam*, judging from analogy, must signify "the whole, entire, the complete", collectively "all". Moreover, the Kiliwee terms for "fingers (dedos)" and "toes (dedos del pié)" are *salchepa* and *emechepah*, respectively, wherein the element *chepah* is added to *esal*, "hand", and to *eme*, "leg". Hence it may be inferred that *chepam-mesig* signifies "one complete count of all the fingers", and so "ten". The next is Cochimi, in which *naganna* means "hand", and the last term (I) appears to be miswritten. It will be seen from these partial analyses of the names for the digit "ten" that there is no linguistic relationship between the Serian and the Yuman terms.

ELEVEN

<i>Serian</i>	<i>Yuman</i>
A.	6. aséentik-nitauk
B. tan-tasó-que	8. sienti
C.	1. sita-giala
D.	10. siti-giálaga
	18. siti-kwaï'hli
	11. sitta-gállá
	3. sahhoke-shitti
	4. shahóque-maga-shentick
	20. shahajóc umaig ashénd
	2. uave-shiti
	19. uáveshíti
	5. maik-shendík
	13. mae-sint
	21. emmiá-shiti-ki
	23. mesigk-malha
	14. nie-khin

The only Seri example of the numeral "eleven" is that which was recorded by Mr Bartlett, who writes it *tan-ta-só-que*, instead of *tan-tasó-que*, which exhibits the component elements of this compound. This expression signifies "one added to, or, over, upon". Its conceptual base is the numeral *tasó*, "one". The initial *tan-* has already been discussed while treating of the numeral "seven". It was there made a cognate of the initial *tom-* or *tum-* of the several examples of that digit, and likewise of *tanchl* in Mr Bartlett's numbers 12-19. It would seem that the correct form for "eleven" should be *tanchl-tasóque*, i. e., "ten-one-added-on". Where "hand" is the name for "five" and is an element in the name for "ten" there arises confusion, unless there is marked difference between the two expressions.

In the Yuman list the first fourteen examples of the numeral "eleven" have some form of the digit *aséntik*. (*sita, siti, sint, shiti*), "one", as the dominant element in the expression, while the elements denoting "added to, more than, plus", are severally as follows: in the first *-nitauck*, in four others a variant of *-giala*, in five others the prefix *maga-* (*umaiga, emmiá, mae*); while in some such a flexion is entirely wanting, probably, at least in a majority of the forms, because of misapprehension on the part of the several collectors rather than the abrasion of use. But in *mesigk-mahla* (23) *mesigk* denotes "one", and *malha* "plus, added to". In the form *nie-khin* (14), *khin* signifies "one", and the prefix *nie-*, "plus, added". It will be noticed that the flexion *maga* (*umaiga, mae, emmiá*) is a prefix to the element "one", and so when *shahoque*, "ten", is expressed as in (4) it stands between the two notional terms. But in (8) neither "ten" nor an element denotive of addition is expressed.

TWELVE

<i>Serian</i>	<i>Yuman</i>
A.	6. havik-nitauck
B. tanchltoque, tan-chlt-oque	11. hawā-gállā
C.	18. hěwakě-kwā'hli
D.	10. hovak-tiálik
	23. hooak-malha
	1. huwaga-giala
	21. emmiá-hawáka
	13. mae-hewik
	5. maik-χawík
	19. uá-hoáki
	2. uave-uake
	14. nie-khvabgushbaib
	20. shahahjóc umai-javíc (j=χ)
	4. shahóque maga habick
	8. vaike.

The only known example of the Seri numeral "twelve" is that which was recorded by Mr Bartlett. He has apparently misapprehended its true pronunciation, for he wrote *tanchl-to-que* instead of *tanchltakahque* or *tanchltakochque*. In his orthography *kahom* signifies "two", but the final *-om* is employed only in serial counting, so that *kah-* is the stem, which is only a variant of *koch* in *eansl-koch*, "twenty"; and *tanchl* signifies "ten".

In the first six examples of the Yuman list the element "ten" is not expressed, but only some form of the numeral "two", with a suffix denoting "added to, over, more than"; in the next three the flexion of addition is prefixed to the element "two"; and in the next two, (19) and (2) respectively, the element "two" is immediately preceded by the very abbreviated and perhaps misapprehended forms of the numeral "ten"; in the next a very questionable form is recorded, for it appears to be an attempt to form a compound signifying "two times six", but without accomplishing the purpose; yet it may be miswritten for *nio-khoak-ěshbe*, in which *khoak* is the element "two", with a doubled sign of addition, namely, the prefix *nio-*, already explained, and the suffix *-ěshbe*, also explained above. In the next two the element denoting "ten" is expressed, with *umai-javíc* and *maga habick* as the second part, both meaning "two added". The last (8) *vaike* is a highly modified and probably misapprehended form of an earlier *havik-ěsbe*, "two added", with a sub-audition of the numeral "ten".

TWENTY

<i>Serian</i>	<i>Yuman</i>
A. untę-kō k	6. arábavik-takavuts-havík
B. eansl-koch	9. arháp-havik takadútea havík
C. kanlχ kookχ	23. chepam-hooak
D. taul jaukl	22. guwákě wáwi
	18. hěwakě buwáwi
	19. huáka huávi
	1. huwāka huwāva
	III. naganna agannapa inimbal demue- jueg="las manos y los piés"
	3. sahhoke was poppe
	8. sahoaich sahocki hawaich
	13. sauhook ahoowik
	14. selgh-hoág
	4. shahóque ahabick
	20. shahahjóc ahah javíc (j = χ)
	5. shaχúha χawík
	2. uake-uave
	10. vava-hovak
	11. wába-hoā'g
	21. womása-howŭk

The four examples of the Serian numeral "twenty" are merely combinations of the terms *kō'k*, *koch*, *kookχ'* and *jaukl* (for *χaukl*), all cognate forms, meaning "two", and the forms *üntę*, *eansl*, *kanlχ'*, and *taul*, all cognate and signifying "ten".

The Yuman expressions denoting "twenty" are all, with two exceptions, combinations the dialectic elements denotive of "ten" and the forms of the numeral "two", which have been treated elsewhere in their proper places. The two exceptions are (III) the Cochimi, which signifies "all the fingers and toes", and (21) the Santa Catalina, which here presents what appears to be a new term for "ten", for the final word *howŭk* is the numeral "two". These analyses do not show relationship between the Serian and the Yuman terms.

THIRTY

<i>Serian</i>	<i>Yuman</i>
A. ũntę-kōpka	6. arabavik-takavuts-hamók
B. eans'l-kapka	9. arhap-havik-takadútea hamok
C.	23. chepam hoomiak
D.	18. hěmukě buwáwi
	1. humuku huwava
	11. hwáwa hamók
	8. sahoke-hamuck
	13. sauhook-ahoomook
	20. shahahjóc ahah jamúe (j = χ)
	4. shahóque ahamóek
	5. shahúha χamuk
	14. selgh-hamuk
	19. muku-ávi
	2. moke-uave
	10. vava-hamok
	21. womás hamŭ'k

FORTY

<i>Serian</i>	<i>Yuman</i>
A. ũntę-ksō'k	9. arhap-havik takadútca teimpap
B. eans'l-scoch	23. chepam misnok
C.	2. hoba-uave.
D.	18. hopachě buwáwi
	19. hopadsh-uávi
	1. hopätia wáva
	11. hwáwa hoopá
	13. sauhook wauchoopap gishbab
	20. shahahjóe ahah tseumpáp
	5. shaχúka sumpáp
	10. vava-hōpa
	21. womas ahopá

FIFTY

<i>Serian</i>	<i>Yuman</i>
A. ũntę-kóitum	9. arhap-havik takadútca çarhabk
B. eansl-kovat'hom	14. aselghakai
C.	18. hěräpě buwáwi
D.	11. hwáwa ftápa (Gilbert)
	23. mesig quinquedit sol-chepam
	13. sauhook wa sarap
	19. sěráp uávi
	20. shahahjóe ahah saaráp
	1. thěrapa wuwáva
	10. vava hatábuk
	21. womas aseräpa
	2. satabe-uave.

COMPARATIVE LISTS OF SERIAN AND YUMAN CONCEPTUAL TERMS

SERIAN

<i>Man</i>	<i>Woman</i>	<i>People, Indians</i>
A. kŭ'tümm	A. kmámm	A. ku ⁿ -kák
B. éketam	B. ékemam	B. komkak
C. ktam	C. kmam	C. komkak
D. { tam (ktam) tamuk; ktamuk (pl.)	D. { kmam kamujik, kamykij (pl.)	D.

YUMAN

III. tama	19. ěpá věχí	II. demansú = "Indian"
IV. { tamá, tämmá, tammá = "homo" uami = "man, male"	3. nisúke	24. epái
II. delmá	16. nechuck	26. ipai = "Indian"
I. wanyu-ami = "young man"	17. gechak	15. ipaye
3. apah	5. { senyeák senyeáks	11. upáh, ũp-ă'
19a. ěpá	12. seenyack	I. { maha = "people" mahati = "Indian"
4. epá-che (pl.)	8. siniake	23. mehale
13. epa	20. siñaacca	17. m'tee-pai
12. { epáh epátch (pl.)	4. sin'yaáke-che (pl.)	12. ml-épáie
	7. thinyeahka	7. peepa
	9. { ěinyiäk ěinyiákte (pl.)	13. peepa-chamal
		8. pipachi-taik = "many men"

YUMAN—continued

Man	Woman	People, Indians
17. epa	24. sinquahin	9. pipate (pl. of man)
8. ipa	24a. ěssin	20. piipatse-pallenám
2. {ipa ipa guli "Indian"	15. {siin syn	16. tepitetchetleowah
5. {ipás (s doubtful) ipátsh (pl.)	27. sin	5. {matsh-tshámak matsh-tshámuk
19b. pá, pá'h	26. siñ	24a. ipai = "Indian"
10. pa	14. sing	
18. {pa pa-hěmí = "large man"	6. hanya-aga	
21. pa hürmí = "large man"	13. suyaka	
22. pa-hami = "large man"	10. pogii	
7. peepa, pé-paa	11. {pūkí (Gilbert) pūkehi	
9. {pipa pipate (pl.)	18. pukí	
11. ūpā' (Gilbert)	22. peke	
15. ecoúch	1. kweí iníniga = "squaw, wife"	
16. ecotche	2. make, ouidima = "In- dian woman"	
14. igutch	21. mēbīsí	
24a. ikute	23. kōkoa	
26. {ikuitch ikwits	I. wáhki	
27. ikwite	IV. {wakoe (Laymon) wuctu, wuetu (Lay- mon)	
20. curacca	huägin = "mulier"	
23. kimai	II. huisin	
24. equitchquahin		

Those philologists who have classed the Seri tongue as a dialect of the Yuman stock have laid great stress on the alluring phonetic accordance, supposedly indicative of genetic relationship, between the Laymon (and probably Cochimi) *tamá* or *tammá*, "man (homo)", and the Serian *kū'tūmm*, *ktam* or *eketam*, possibly of the same signification—i. e., "man (homo)", rather than "man (vir)"; but the accompanying comparative list of vocables purporting to denote "man (homo)" discloses the significant fact that *tamá* (*tammá*) belongs only to the Laymon, and (probably) the Cochimi dialects. In Mr Bartlett's Cochimi record, he wrote *delmá*, "man, hombre", and *guami* (Spanish *g*), "husband"—that is, "male person". From certain Laymon texts with interlinear translations in Buschmann's "Die Spuren der aztekischen Sprache", etc., the following forms of the vocables in question have been extracted: *tammá*, "man (homo, Mensch)"; *tamma-butel*, "this man"; *uami-butel*, "this man, this male person"; *wami-jua*, "man (vir, Mann), male person"; *wakoe-butel*, "this woman"; *gui-wuctu-jua*, "his woman"; *whanu*, "small, young, a child"; *whanu-wami-jua*, "a small, or young, male person", perhaps "a boy". Now, *wanju* or *wanyu*, "young", *wáhki*, "woman" (-*aki* in *wanju-aki*, "girl"—i. e., "young woman"); *ouami*, "(my) husband", correctly, "(my) male person"; *ouiqua*, "(my) wife", evidently a form of *wáhki*, "woman", are all Cochimi vocables. Dr Gabb, in his Cochimi vocabulary, did not record the presumptively correct term denoting "man"; for the word which he has written, *wanyuami*, and which he has translated "man", really signifies, "young male person", rather than "man (homo)". This is unfortunate, because in Mr Bartlett's Cochimi, *delmá* is rendered

"man (homo)", and the Cochimi of Padre Clavigero has *tamá*, "man", and the Laymon, *tamá*, *tammá*, or *tämmá*, "man", and there is seemingly no absolutely satisfactory method of ascertaining whether the *l* of Mr Bartlett's *delmá*, "man", is genetic or not. But as the Laymon and the Cochimi are apparently cognate dialects, it is probable that the form *delmá* of Bartlett's Cochimi and the *tamá* or *tämmá* of the Laymon and the Cochimi of Padre Clavigero are cognate vocables. The part of the terms which the two dialects have in common is the final and usually accented *-má*; in other words, *-má* is the common conceptual element in the vocables *delmá* and *tamá*. This of course rests on the presumption that *tamá* and *delmá* are compound terms, having probably genetic relationship. The following facts may aid in discovering the lexica constituting the elements of the two words in question, and these, it is seen, are *-má*, *del-*, and *ta-*. In Dr W. M. Gabb's record of Cochimi words, collected by him in the vicinity of San Borja and Santa Gertrudis about the "center of the peninsula" of Lower California, the term "Indian" is represented by *maha-ti*, and "people" by *maha*. On the same schedule with the Cochimi Dr Gabb recorded a vocabulary of the Kiliwee, dwelling 150 miles "further north" at and near San Quentin. In this dialect, which is Yuman, the word "Indian" is rendered by *kimai*, and "people" by *meha-le* (preferably *mexale*¹). The apparently genetic accordance between the Kiliwee word for "people" and the Cochimi terms denoting "Indian" and "people" is brought into stronger light by a comparison of the terms for "warrior"; in the Cochimi, *mach-karai* (*max'-karai*), in the Kiliwee, *mahk-pkátai* (*maxk-pkátai*). The unquestioned kinship between these two dialects warrants the inference that these two compound expressions, denotive of the same thing and possessing at least one common element, *max-* or *max'-*, must accord approximately at least, in the signification of their heteromorphic constituents.

In the Kiliwee *pah-kute* signifies "a chief", from *e-pa*, "Indian", hence "man" (primitively) and *kute* for *(k)e-tai*, "large, great", hence "old", found in such expressions as *sal-kootai*, "thumb", literally "large finger", and *pah-tai*, "old", but literally "old man". So the name for a chief may be rendered freely "the elder person; the old man (the wise man)". The Cochimi term *mach-ka-é*, as written by Dr Gabb, denotes "far", while *mach-i-kang-i-nga* means "near". These vocables may preferably be written thus, *max'-kaé* and *max'-kañ-iña*. The ending *-iña* is a privative flexion or suffix in Cochimi, forming derivatives with meanings directly adverse to those of the primals; so the literal signification of *max'-kañ-iña* is "not far", hence "near"; but in *max'-kaé* the final *-kaé* is the adjective "large, great", having here an intensive function signifying approximately "more", while *max'-* is evidently a form of the proximate pronominal found in the terms "thou" and "ye" in this group of languages. In the Laymon *kahal ka*, "water large (is)", for a "sea or stream of water", *ka* signifies "large, great"; and the Cochimi *kättenyi*, "few, not much", is literally *kätte-* for *(k)etai*, "large, great, much, many", and *-iñi* the privative denoting "not". And the Laymon *metañ*, "many, much", is evidently from *m-* for *ma* (a proximate pronominal), *eta* for the Cochimi *etai*, "large, great, much, many", and the final *-ñ*. Compare Bartlett's *modo*, "all, todos", and *modol-iñi*, "many, much". Such are some of the forms of the adjective signifying "great, large, much, many". There is also in the Cochimi an intensive *pa*, *ibal*, *ibá*, which signifies "very". This explains the presence of the *p-* sound in the term *maxk-pkátai*, the Kiliwee for "warrior".

It has thus been shown that a probable connection exists between the Cochimi terms *maha*, "people", and *maha-ti*, "Indian", on the one hand, and the *max-*, inferentially signifying "man" in the Cochimi and Kiliwee names for "warrior", *max'-*

¹In Dr Gabb's alphabet, an underscored *ch* occurs, which, he states, sounds "like soft German 'ch' as in 'ich'", and also an underscored *h*, which is, he says, "heavily aspirated". For convenience the character *χ* has been substituted for both these sounds, except that for the former it is accented thus *χ'*.

karai and *maχk-pkútai*, and the *mexa-* in the Kiliwee *mexa-le*, "people", on the other. The significance of the initial *ta-* in *tämmá* (*tamá*, *tammá*, *tamal*, *tammalá*) seems to be that of a definitive pronominal; it is found in the Cochimi of Dr Gabb and in the Laymon. Dr Gabb recorded in his vocabulary *ta-ip*, "good", but *ta-ip-ena*, "bad", the final *-ena* being the characteristic Cochimi privative suffix elsewhere written *-iñi*. So it would seem that the stem is *-ip*, meaning "good, desirable". In Kiliwee *aχok* (Dr Gabb's *ahok*) signifies "flesh, meat", while *aχok-m-gai* denotes "deer", literally "good, desirable meat", in which *m-gai* signifies "good, desirable"; it is probably connected with the term *ka*, "great", and its variants noted above, and so may also denote "abundance". Under the word "love" Dr Gabb has *m'gai-yip*, the free translation of which should read "greatly desirable; abundantly good, well". Thus *-ip*, or *-yip*, signifies "desirable, good, pleasing to the sense"; in Laymon likewise the initial *-ta* is sometimes wanting, as in *wayp-mang*, "good (is)", as distinguished from *tahipo-mang*, "good (is)". The final *-mang* (= *mañ*) is a term apparently denoting "to exist, to live", and is possibly cognate with the *má* (Kiliwee *me*) in the words discussed above.

This, it would appear, is the origin of the *má* in *tamá*, "man". The individual character of the initial *ta* is suggested in what has already been said in reference to its absence from such vocables as *wayp-mang* and *m'gai-yip*, in which the *wayp* and the *yip* are identical with the *ip* in *ta-ip*, "good". This term *ta* appears as the relative "that" under the form *te*. It also appears as a prefix in the Cochimi and Laymon numeral "one" and in the adjective *te-junoey*, "a few"; also in the adjective *de-muejueg*, "all"; and again in the peculiar numeral "one", namely *du-juenidi*.

Such appears to be the analysis of the Cochimi and Laymon *tamá*, "man". The form of it recorded by Mr Bartlett, *del-má*, "man", compared with his *de-ma-nsú*, "Indian", is seemingly a valid confirmation of the foregoing derivation, because this *l* in *de-l-má* is probably identical with the final *l* or *lá* in *tama-l* and *tamma-lá*, "man", cited above. In the Cochimi for "water", *ca-l*, its true character is partly seen; *cal oso* signifies "river", but in *caa-pa-l* (Gabb's *kaχ-pa-ra*), "sea", it becomes a suffix, the element *pa* signifying "much, great", and Dr Gabb's form shows that in the dialect he recorded its form is *ra*; again in *cal ka*, "lake", literally "large water", it is a suffix. It appears again in Mr Bartlett's *del-mag*, "light", as compared with Dr Gabb's *ma-ahra* (= *maah-ra*), "fire"; it appears evident that the *mag* of *del-mag* and the *maah* of *maah-ra* are cognate, so that *de-l* is here found as a prefix, as it is in Mr Bartlett's *de-l-má*, "man". Thus it is that *delmá* and *dema-nsú*, "Indian", of Mr Bartlett and *tamá* and *tammalá* of Hervas, Duflot de Mofras, and Miguel del Barco are cognate.

It accordingly appears that the assumed linguistic relationship between the forms discussed above and the Serian *kũ'tümm* (*ktam*, *tam*), "man", is very improbable, because there are no evidences nor data indicative that the Serian forms have had a common linguistic tradition with the Cochimi and Kiliwee forms discussed above. It seems proper, therefore, to reject such assumed relationship between the Yuman and the Serian vocables in this comparison.

The comparative list of names purporting to signify "woman" in both the Serian and the Yuman tongues reveals not a single phonetic or lexic accordance that may even suggest linguistic kinship between the two groups of vocables.

The comparative list of terms purporting to signify "people" and "Indian" in the Serian and Yuman groups of languages exhibits, in a manner similar to those already examined, the same decisive lack of phonetic accordance between the vocables compared.

SERIAN

Head	Hair	Nose
A. a ^h leht	(a ^h leht)	ññf
B. ih'lit	ina = "feather" (?)	ife
C. ill'it	ill'it kopt'no	hif
D.	obeka = "down"	

YUMAN

<i>Head</i>	<i>Hair</i>	<i>Nose</i>
2. ho (and "face")	1. kawáwa	3. aho
17. ho	11. cowäwä	16. ho, chinattuksah
11. hoo	18. kuwâ'wa	15. h'ho
19. { u hu	21. kâwâ'wâ	13. ho
1. huú	2. { kovañva govava (Loew)	17. ho
10. huu	19. kwáwa	21. hó
4. chukschâssese	22. kwawe	20. ijó (j=χ)
8. ichucksa	10. koau	4. hoó-che (pl. ?)
7. chookk'sa	7. mókora (Gibbs)	7. mee-hoo,="thy nose"
13. chookoosá	9. mokóřa	12. { ee-hóo eho-tche (pl.)
6. tchuksa	6. mogora	2. hu
9. teúksa	8. amacora	18. hu
20. edzukshá	7. m e m - m u k k o r r a (Mowry)	19. hú
12a. ecou-tsucherówo	12b. ocono	22. hu
14. iltá	4. eéche	6. ihu
3. { itchhama mocorre (Peabody; = "hair"?)	12a. eětche (pl. ?)	8. ihu
12b. oom-whelthe	20. ee	9. { hihú hihúv-tea (pl.)
24. huch'lta	5. eès	14. khu
15. hulchtekamo	23. neesmok	5. iχu-úsh (pl.)
16. tenahcumoh	3. { amawhach mowh'l	23. epe
18. kûmpaiya kûwâ'wa	15. hulchsta	24. hon'yapá
21. kapai	24. huch'lmo	11. yaya (Gilbert)
5. kwisásh	17. h'lemo	yaiivă (Renshawe)
23. ne-ee	14. khaltá	10. yaiya
I. epok	16. hetltar (r silent)	1. yáyō
II. gupir	13. m'aeae	I. vichpyuk
III. agoppi	I. epok	II. huichil
25. h ũ s t a - k w a r ũ r, =	II. lagubú	25. ah'u (=aχu)
"scalp"	25. hũsta	26. a'hō; h'ō (=aχō)
26. māvhl	26. hl-ta	27. eh'ū (=eχū)
27. h'l-ta (=χlta)	27. h'l-ta (=χlta)	26. h'ō (χo),="beak, bill"
24a. ā-hú	24a. h'alta (=χalta)	24a. ā-hú="beak, bill"

This comparison of the Seri and Yuman terms for "head", to ascertain linguistic relationship, seems barren of any but a negative result. It is true that there is an apparent resemblance between the Seri and the Diegueño terms, and a still more doubtful one between the Seri and the Kutchan. It is significant that the twenty-odd other Yuman dialects employ for "head" an entirely different term. The kinship of the Seri term to either the Kutchan or the Diegueño is therefore nothing more than a possibility, and it seems safe to reject it. The phonetic discordances, and the fact that there has been no evidence adduced to show that the Diegueño term was ever prevalent in the other Yuman dialects, warrant this rejection.

The following analysis may be of service here. A careful comparison of the Diegueño terms for "head", and "hair" indicates that the form (14) *ilta*, "head", is very probably a shortened *khalta*, "hair". In the Diegueño, Santa Isabella, and Mesa Grande vocabularies Mr Henshaw recorded several names for "hair" and "head" which may serve to aid in the explanation of the words in the following comparative list. In his Diegueño record *lēmīs* and *līmi*, variants evidently of a common original, stand for "hair, feathers, skin, and fish scales", as in the entries *haltau lēmīs*, "rabbit skin". *kasau lēmīs*, "fish scales", *kūkwaip lēmīs*, "deerskin",

lēmīs, "feathers" and "hair" of animals; and also *giu-lēmīs*, "eyebrow", literally, "eye hair", and *a-limi*, "beard", literally, "mouth hair", in which *giu* for *iūu* means "eye" and *a* for *gau*, "mouth". In his Mesa Grande vocabulary, Mr Henshaw recorded *h'ltā* for both "head" and "hair"; in his Hawi Rancheria vocabulary he wrote *mā-whl* for "head", and *h'ltā* for "hair"; and lastly, in his Santa Isabella record *hūsta* means "hair", *hūsta-kwarūr* is written for "head" (literally, "hair skin", meaning "the scalp"); and *ūstū-kūmo* is rendered "skull". Thus, *h'ltā*, *lēmīs*, and *hūsta* are terms denoting "hair, fur, skin, feathers, and fish scales". Yet it is possible that *hūsta* is a softened and ill-pronounced cognate of *h'ltā*. In Corbusier's Yavapai vocabulary "eyebrow" is written *yuh-kēlēme*, and in Dr White's Tonto word list *yū-gūlma*, both signifying literally "eye hair". It is apparently safe, therefore, to regard the element *-kēlēme* or *-gūlma* of these two dialects as cognate with the *lēmīs* (*līmi*) noticed above. In his Mohave record Mr Corbusier renders his entry *himīç* (*himīth*) by "hair on an animal". Yet in this very dialect he writes *hidho-kooōros himiç*, "eyebrow", literally, "eye hair"; and in the H'taām or San Tomaseño by Dr Gabb "beard" is written *āh-lamīse*, literally, "mouth hair". "Hair" is written *helt'h-yee-mōh*, seemingly "head hair", for "forehead" is rendered by *het'l-ōm̄y*, in which *helt'h-* or *het'l-* seems to be the term denotive of "head"; but in Lieutenant Mowry's Diegueño this term, which is there written *hetltar* (for *hetltā*) signifies "hair". In Ten Kate's Maricopa, "beard" is written *ya-womis*, literally "mouth hair", *-womis* being clearly a variant of *himiç*, which is but a variant of *lī-mīth* and of *-kēlēme* noticed above. In the Santa Isabella, Mr Henshaw wrote "feathers" *lī-mīth*.

COMPARATIVE LIST OF DIEGUEÑO AND OTHER YUMAN NAMES FOR "HEAD", "HAIR"

Head	Hair
14. <i>iltá</i>	<i>khaltá</i>
15. <i>hu-lchte-kamo</i>	<i>hu-lchsta</i>
16. <i>tenah-cumoh</i>	<i>hetltar</i> (= <i>hetltā</i>)
24. <i>hu-ch'ltā</i>	<i>hu-ch'lmo</i>
24a. <i>āhú</i> (also "beak, bill")	<i>h'al-ta</i> (= <i>χal-ta</i>)
17. <i>ho</i> (= <i>χo</i>)	<i>h'lemo</i> (= <i>χlemo</i>)
27. <i>h'l-ta</i> (= <i>χl-ta</i>)	<i>h'l-ta</i> (= <i>χl-ta</i>)
26. <i>mā-whl</i>	<i>hl-ta</i>
<i>h'o</i> (= <i>χo</i>) (also "beak, bill")	
25. <i>hūsta?</i>	<i>hūsta</i>

It seems clear, furthermore, that *iltá* (14) is merely a curtailed example of *khaltá* (14), for it is clear that this *iltá* is a cognate with the *h'ltā* (27), the initial *h'*-sound of which, Mr Henshaw says, represents a rough guttural utterance (represented herein by the character *χ*. In (27) of the comparative list *h'ltā*, expresses both "head" and "hair", thus completing the circuit and making *iltá* cognate with *khaltá*, since it is plain that *h'al-ta* (*χalta*) of 24a, *hl-ta* of 26, and *h'l-ta* of 27, the initial sound in each being, as shown above, a rough guttural are related to *khaltá*. The term *hu-ch'lmo* (24) is a compound of *hu-*, "head", and *-ch'lmo*, an evident cognate with the element *-gūlma* or *-kēlēme* (= *kēlēmis*) noticed above, denoting "hair"; hence, the combination signifies "hair of the head". In like manner the H'taām or San Tomaseño form (17) *h'lemo* may be explained. In this dialect *ho* (= *χo*) signifies "head", and an original *holemo* (= *χo-lēmīs*), signifying "hair of the head", became contracted to the form in question, namely, *h'lemo*. In the Santa Isabella record of Mr Henshaw *hūsta* signifies "hair", but *hūsta-kwarūr* is given for "head", while *ūs-tūk-ūm-ō* is translated "skull"; the last expression should have been written (*h*)*ūstū-kūmō*. Under the caption "robe of rabbit skins", *h'kwēr* is found, but under "skin" in "Parts of the Body" of his schedule, *nyakwāt* (26) and *n'kwēr* (25) are found, both meaning "my skin"; Corbusier's Mohave record has *himūt-makwīl* ren-

dered "skin of man", but meaning "skin of the body", *himát* signifying "body", and *makwil*, "skin". The Mesa Grande term for skin is given as *limis*, a vocable which has already been discussed. So it must be that the foregoing *hũsta-kwarũr* signifies "skin of the hair" or "skin of the head", if *hũsta* is also a synonym for "head". The final *-ũr* in the compound in question is due to the misapprehension of the rolled or trilled *r*-sound with which the term for skin terminates. The element *-kũmō* of the vocable (*h*)*ũstũ-kũmō*, rendered "skull", is also a factor in the Diegueño terms for "head" in numbers (15) and (16) of the comparative list; so that it is highly probable that these terms signify "skull" rather than "head". And, lastly, it is equally probable that the expression (18) *kumpaiya kũwâwâ* signifies "hair of the whole head (skull)" rather than "head" only; for the initial *kum-* is presumptively the cognate of the forms *-cumōh* and *-kũmō*, denoting in the compounds already noted "skull", while *-paiya* signifies "all", and *kũwâwâ* "hair". There appears to be a relationship between the terms for "head" and "hair" in (12*b*) *oomwhelthe*, "head", (3) *amawhach* and *mowh'l*, "hair", and (26) *mă-whl*, "head". The explanation of the term *hu-lehsta* (15), denoting "hair", is probably to be found in its resolution into *hu* (*χu*), "head", and *lehsta* for a form of *hũsta*, "hair", discussed above; the term signifies, therefore, "hair of the head". In like manner *huch'lta* (24), rendered "head" there, seems rather to mean "hair of the head", by its reduction to *hu*, "head", and *ch'lta*, for a form of *khalta* (= *χalta*), "hair".

The Serian variants of the term denoting "head", are respectively (A) *a^hleht*, (B) *ih'lit*, and (C) *ill'it*. These forms certainly have no kinship with the Yuman terms discussed above; they have a totally alien aspect. The Serian terms for "hair" are respectively (A) *a^hleht*, (B) *ina* ("feather" rather than "hair"), (C) *ill'it kopt'no*, and (D) *obeke*, and while the last has an aspect foreign to the other terms classed as Serian, none of the vocables appear to offer ground upon which to predicate relationship between the Yuman and the Serian. For a further explanation of *obeke* turn to the discussion of "tooth".

The comparative list of Serian and Yuman names for the "nose" reveals no evidence of linguistic relationship between the two groups; but an inspection of the Yuman lists for "head", "hair", and "nose", exhibits a close connection between a number of the names for "head", "nose", and "beak, bill".

SERIAN		
<i>Eye</i>	<i>Face</i>	<i>To see</i>
A. mĩtto	aiyen	
B. ʔto	iyén	ikehom
C. hittovχs (pl. ?)	hien (in hienkipkue)= "cheeks"	okta; χ ookta
D. iktoj (for iktoχ) (pl. ?)	llen	
YUMAN		
4. edóche (pl.)	edóche	eyûuk
7. hidho	hidho	hissâm (far), héyûk (near)
7. meet'dho "thy eye"	meethoownya="thy face"	ekwuo
6. ʔdo		hisamk, i-údo ¹
8. idosaca	ilo	halquack
9. hiço, hiçotea (pl.)	hiço	samk="I see it"
		isampote="I do not see"
12 <i>a</i> . edotche-ée (pl.)	odotche. eeyu }	o-ook
13. medok="thy eye"	meya	eyu
20. edhó	edo-cuámecoba	iyúe
21. yú	yú	
2. yú	ho (and "head")	ó-o

¹This signifies, "let us see". Dr Loew also writes, *igó-ok*, "to see you".

YUMAN—continued

<i>Eye</i>	<i>Face</i>	<i>To see</i>
22. yu	yu	
19.		uú
11. yu, úh (Gilbert)	ethool, tialbûgû	
18. yuh	yu	ahámi
11. yuh' (Renshawe)	ethoól	
1. yú-u	páya	
10. yu-u	yuu	akhámuk
I. yupicha (pl.?)	yupi	gir
II. ye-baká	yabi	amigi
3. agu, ihu	iuahó	ouwerk
23. ayu	neh <u>u</u> ha	sau
14. hiyéu, i-ído		iyib
17. yeoo	yeoo	oom
15. yiou	alt'hwá	ewiouch
16. eeyou	eeoh	ohum
12b. ceyu-suneyao		
24.	yeou	kewú
III.		gadey
5. woyoès	idosh, yaxelemísh	ashāām̄k
25. hiiyu	hiiyu	
26. iyu	iyu	
27. iyu	iyu	

Eight of the terms for “eye” in the Yuman word lists are *ído*, *hidho*, or their variants, in five Yuman dialects, Maricopa, Mohave, Hummockhave, Kutchan, and M’mat (virtually in but three, for Hummockhave is but a subdialect of Mohave, and M’mat of Kutchan), and the remaining twenty-one examples are from an entirely different stem or base which is apparently connected with a verb “to see,” one of the forms of which is *eyúuk* (4), *héyuk* (7), and *iyó-ok* (6); the form *ído* and its several variants is seemingly connected with *iúdo* (6), “let us see”, apparently an imperative form, in a manner similar to the connection between *yú* (2), “eye”, and its variants, and the verb form *eyúuk* just cited.

It will be seen from the table that *okta* and *χ'ookta* (or *χ'ukta*) are the Serian forms of the verb “to see”. The form *iktoj* or *iktoχ'*, “eyes”, recorded by Sr Tenochio, is the nominal form of that verb, the final *j* or *χ'* being, as it would appear, the plural ending. The *-vχs* final of M Pinart’s record as distinguished from Professor McGee’s *mítto* and Mr Bartlett’s *íto* and approximated in Sr Tenochio’s *iktoχ'*, is evidently plural in function. While the Serian material bearing on this question is, indeed, very meager, it nevertheless seems proper to regard the apparent accordance between the Serian term for “eye (eyes)” and the Yuman vocable, *ído* and its variants, of limited prevalency, signifying “eye,” as fortuitous rather than genetic.

The comparative list of the Serian and the Yuman names for the “face” shows no relationship between the two groups of languages.

SERIAN

<i>Tongue</i>	<i>Tooth, teeth</i>	<i>Foot</i>
A. áps's	A. atá'st	A. tãhöt ^{kl}
B. ip'l	B. ítast	B. itóva
C. hipχl	C. hitast	C. ittovaχ
D.	D.	D. itoba

YUMAN

<i>Tongue</i>	<i>Tooth, teeth</i>	<i>Foot</i>
II. abilg	4. edoóche	3. amea (Peabody)
12. {epulch	12. aredóche	13. mee
{epailche	6. idó	17. mee
4. epalch	8. ido	11. mi (Gilbert)
10. ipal	5. hidoö's	19. mi
11. ipā'l (Gilbert)	9. hidhó (hiqó)	21. mǐ'
21. ipä'l	7. meet'dho	10. mie
20. ipáll	13. medok	18. mǐh
8. ipala	20. edháv	11. mǐ ⁿ h (Renshawe)
2. pala	11. yâ (Gilbert)	1. mǐi
6. ipaylya	19. yâ	24. emil
I. hapara	21. yâ'	15. emil-yepiyen
18. hipä'l	11. yō (Renshawe)	4. emésh
5. hipálsh	2. yo	8. eme-culepe
9. hipäly'	18. yoh	23. emepah
13. mepal	1. yóo	12. emetch-slip aslap-yah
7. {meepahlya	10. yoo	20. eme-guzlapa-zl'áp
{hípala	17. yeow	16. emmee
IV. mabela	16. eow (ow long)	6. ime
15. anapalch	23. eau	3. imi-coushu
24. anapalch	14. iyao	14. i-mil
14. anepáilkh	3. iyahui	9. himé
16. anpatl	15. iyáou	5. himís
17. henapail	24. iyaou	7. meemee
23. nehāpal	II. foea	2. {nanyo
3. inyapatch	I. hastaá	{nanû (White)
1. yupáu		I. ma-nyakkoyan (cf. ma-nyak, "leg")
11. yupäl (Renshawe)		IV. agannapa (cf. "leg", "hand")

After a careful examination of the collated lists of names purporting to signify "tongue" in the Serian and Yuman languages it will be seen that the relationship conjectured to exist between the two groups is fortuitous or coincidental rather than real. The guttural rough breathing χ preceding the l sound in M Pinart's record, and indicated by an apostrophe in Mr Bartlett's spelling and by an s in Professor McGee's orthography, is clearly wanting in all the Yuman terms cited. Were there linguistic relationship between the two groups of terms here compared it would seem that this sound should find a place in one or another of the long list of Yuman terms, notably divergent among themselves. It is possible, if not probable, that the final l , la , or ra of the Yuman terms is not a part of the stem; but this would not affect the want of accordance noted above.

An analytic investigation of the comparative list of vocables purporting to signify "tooth" in the Serian and the Yuman languages discloses no evidence of genetic relationship between them. Those who classify the Serian speech as a dialect of the Yuman cite the Yuman *ido*, *hidhó* (the *eh-doh* of Lieutenant Bergland), signifying "tooth", as one of the vocables indicating a genetic relationship between the two groups of languages. The comparison is made between the *ido*, *hidhó*, and *eh-doh* cited above and the close variants of the Serian *ata'st*. An inspection of the comparative list of names for "tooth" shows that this particular Yuman form is confined to the Mohave, Maricopa, and Kutchan dialects (for the M'mat, which also employs this term, is nearly identical with the Kutchan), and that the remainder of the Yuman

list of dialects has, with a single exception, an entirely different word: this exception being the Cochimi, which independently has another. The Yuman group, then, has three radically different words purporting to signify "tooth".

The Serian vocable for "tooth" is a compound term, being composed of elements denoting "mouth" and "stone". In the Seri word-collection of Professor McGee *attěnn* signifies "mouth"; *atta-moχ*, "lower lip", possibly "down about the mouth"; *attahk*, "saliva" ("water of the mouth"); *attahkt*, "the chin"; *takōps*, "upper lip"; *attēms*, "beard"; *ata'st*, "tooth"; and *a'st*, "rock, stone". Mr Bartlett, in his vocabulary, recorded *iten*, "mouth"; *ita-mocken*, "beard"; and *ast*, "stone". M Pinart, in his Seri word list, wrote *hiten*, "mouth"; *hita-mokken*, "beard"; and *hast*, "stone". Lastly, Sr Tenochio wrote *iten*, "mouth", and *ahste*, "stone", in *ahsteka* "large, high stone, rock". Sr Tenochio also recorded *obeke*, "hair, down (pelo)". One of the peculiarities of the sounds represented by the letters *m* and *b* is that in many instances they grade one into the other. There is here, seemingly, a case in point. The *moχ* of Professor McGee, the *mocken* of Mr Bartlett, the *mokken* of M. Pinart, and the *obeke* of Sr Tenochio appear to be cognates. Substituting *m* for the *b* in *obeke*, *omeke* results, which is approximately the *moχ*, *mocken*, *mokken* cited above. Hence, *hita-mokken* and its congeners, it seems, signify "down of the mouth". In *attahk*, "saliva", the element combining with *attě* (for it is plain that the final *-n* is dropped in compounding) is *'ahk* or *'akh*, "water", so that this compound signifies, literally, "water of the month". These analyses show that *attěnn*, *iten*, and *hiten*, dropping the final *n*-sound, unite with other elements in the form *attě*, *ite*, and *hite*, respectively. Now, these, in combination with *a'st* or *ast*, "stone", become, respectively, *atta'st*, *itast*, and *hitast*, the forms of the word for "tooth" recorded by Professor McGee, Mr Bartlett, and M Pinart, in the order given. The Serian name for "tooth" signifies, then, literally "stone of the mouth" or "stones of the mouth". This analysis demonstrates the lack of relationship between the Serian and Yuman names for tooth.

The comparative schedules of names for "foot" in the Serian and the Yuman languages show no accordances of a phonetic character tending to show any genetic relationship between the two groups compared.

SERIAN

<i>Arm</i>	<i>Hand</i>	<i>Finger(s)</i>	<i>Thumb</i>	<i>Fingernail(s)</i>
A. mī noūlt'	A. $\left\{ \begin{array}{l} \text{ūnol'k} \\ \text{ūnlūhss'} \\ \text{unlā'hss'} \end{array} \right.$	A. ūnut-	A. ūnultekōk	A. ūnosk
B. inoyl	B. inosiskersk	B. inosshack	B.	B. inósk'l
C. innolχ'	C. intlash	C. inol'tis	C. inol'vekoχ	C. inoskl̄χ
D. inls	D.	D.	D.	D.

YUMAN

2b. sote (White)	10. sal	3. a i n c h a h o	1. sal-kōvatéa	6. salgolyoho
1. t'hótii	11. sal	(Heintzel-	10. sal-guvetee	23. salhow
10. thutii	21. sál	man)	11. {sál-qovutéh	21. sál saleehó
11. thutiya (Gil-	18. sál	6. salgoharaba	11. {sal-guviteye	7. saltilyoho
bert)	22. sále	21. salsēlawhó=	18. sál-kuběté	(Gibbs)
18. thudí	1. sálle	"fingernail"	21. sal-kūbité	9. hisalyekēl-
13. mevee	23. esal	23. salchepa	9. hisalye-kū-	yēho
4. mibiisch	24. esalch	11. {sáltiqī	bûtá	8. isalculyiho
7. {meebeenya	12. eesálche	11. {saltida	19. shál-gubdé	16. asshatl kay-
(Mowry)	7. eesarly a	10. saltídya	23. sal-kootai	show o as
hubí (Gibbs)	(Mowry)	15. selchkasow	2. shal-kóta	in bough

YUMAN—continued

<i>Arm</i>	<i>Hand</i>	<i>Finger(s)</i>	<i>Thumb</i>	<i>Fingernail(s)</i>
9. hivipúk	15. selchpayén	12. esalche serap	13. shal-kserap	12. eesalche calla
2a. vuyeboka	7. hisála(Gibbs)	24. esalchqualy-	5. hishált ye-	hotche
21. sál	9. hisalkothaĩ-	umas	watásh	13. meshalkleho
11. (sál) hǎnōvǎ	ápa	8. isalcusirape	20. ishallechevetá	7. meesarlquil-
= "right	14. isalgh	9. hisalkothaĩ-	I. ginyakyuqui	yoho
hand"(Ren-	8. isalsicon	ápa	25. hasuth-kap-	(Mowry)
shawe)	17. shah(h=χ)	17. shah	atai	15. selchkawaoh
26. satl'	19. shál	3. shawas (Pea-	26. sakl-pítai	14. selkeshau
15. selch	2. shala	body)		18. sělēhó
24. esalch	5. shalkeseráps	4. eshaki-shará-		19. shělahó
12. {eeseth'l	4. eshalish	bish		20. shallglojó
{èsee'l	20. eshallchag-	19. shál		1. siluw'or
23. esílmok	hpeyén	5. shalkeseráps		2. shalahuó
6. isálya	13. meshal	shèndish		25. silyawhó
8. isale	16. asshatl	13. shalkeserap		17. shahnepool
14. isalgh	25. h'asātlkwia-	2. shalagaite=		10. setehóā
17. shah(h=χ)	yěl	"thumb"		11. sītāhwón
19. shál	6. hathbink	20. eshallque-		5. keshliwoχósh
20. eshall	I. ginyak	sharáp		3. elcawho'p
5. ishalish	II. naganná	16. asshatlscarap		(Peabody)
16. asshatl	III. naganná	25. hasuthkwaii-		4. eshekiohoósh
25. h'asath'	IV. naganná	mut		24. esalchqualyu-
I. ginyakpak		meesarlqui-		how
II. guenebí		thahrapa		I. ginyakka
3. {shawarra		7. (Mowry)		II. geneka
{(Peabody)		sequaharapa		
{arowhur		(Gibbs)		
		I. ginyakyuqui		
		II. ignimbal		
		III. ignimbal		
		IV. ñimbal		
		14. enepul		

Prominent among the data set forth to establish an alleged genetic linguistic relationship between the Serian and the Yuman tongues has been the word "hand" as represented in the languages in question.

A discriminating examination, however, of the accompanying comparative schedules, comprising the words "arm, hand, finger, thumb, and fingernail," fails to reveal any evidence that any genetic relationship exists between the languages here subjected to comparison.

It has been suggested that the relationship is established through the Yuman *sal* (*shala*, *isalgh* = *isalχ*), "hand", etc., and the Serian name for "wing" as recorded by M. Pinart, namely, *isselka*; but Mr. Bartlett wrote this word *iseka* without the *l*, so this sound may or may not be genetic. But it has not been shown that *isselka* or *iseka* ever signified "hand, arm, finger, thumb, fingernail", to a Seri, or that it is a component element in any one of these five terms in the Serian tongue; and so it is apparently futile, in the absence of historical evidence, to attempt to employ this term *iseka* or *isselka*, "wing", as an assumed cognate of the Yuman *sal*, to establish linguistic relationship between the languages.

COMPARATIVE LIST OF SERIAN FINGER-NAMES

	McGee	Pinart	Bartlett
Thumb	ũnũltékok	inol'vekoχ	
Forefinger	ũnũ ¹ stess	inol'tis	
Middle finger	ũnũltemũ'ka'p	inol'p'emakkap	
Ring finger	ũnũlteépa	inol'tip	
Little finger	ũnũlschálk	inol'shak	
Arm	{mĩ'noũlt {mĩnoũl'd	innolχ'	i-noyl
Wrist	ũnuhpkíht	inoliavap'χ'a	
Hand	{ũnol'k {ũnlũ'hss',ũnlă'hss'	intlash	i-nos-is-kersk
Fingers		inol'tis	{i-nos-shack {i-nos-shack-itova= "toes"
Right hand		inol'l'apa	
Left hand		istlik	
Finger nails	ũnosk'	inosklχ'	i-nósk'l

It would seem that the term given by M Pinart for "fingers" is not accurate, since he has previously recorded it for "forefinger", in which he is confirmed by Professor McGee. It seems probable that the literal signification of the term for "little finger" is "son (or offspring) of the hand." Professor McGee writes *i-sahk* for "son" as said by the father, and M Pinart writes *isaak* for the same idea.

SERIAN

Wing(s)	Feather(s)	Bird
A.	A.	A.
B. iséka	B. hrekina, = "bird feather"	B. schaík; (schek-) ¹
C. isselka	C. inna	C. shek; (shiik-)
D.	D.	D.

YUMAN

2. sha	4. shabílsh	2. tishá
13. eeshalk'sabillus	5. shawílsh	17a. táchā (San Tomas)
7. ibílya (Gibbs)	7. seebeelya (Mowry)	19. itisha; tyesha
eebeelya (Mowry)	siviya (Gibbs)	22. tesya
9. hivílyě	6. sivílya	21. tcísá
11. wă'lă	9. sivílya	I. icha
18. wálle	8. sewailye	14. asha
23. oowaloo	17. shawalh	15. asa
4. melahótch	12. sahwith'l	18. isá = "eagle"
20. -millajo, (etsiyerre-) ²	13. sabil; (sawillch ³)	11. {issā, = "raven."
21. wírawídă	10. seguala	{ũsă = "eagle"(Gilbert)
24. wirrawir	19. wála	13a. shuh

¹Mr Bartlett wrote *schek-ai̯p̯ch*, "bird's egg", and *ahano-hraík*, "a duck", literally, "water bird", thus showing that *hrek* in the term "feather" signifies "bird". M Pinart wrote *shiik-immen*, "bird's nest", and *ipχ'*, "egg". In both, the spellings here differ somewhat from the terms in the list. In the term for "duck" and "feather", Mr Bartlett substitutes *hr* for the *sch* in his spelling of the name for a "bird".

²In 20 *etsiyerre* signifies "bird".

³From Bartlett's Kutchan or Yuma Vocabulary, MS.

YUMAN—continued

<i>Wing(s)</i>	<i>Feather(s)</i>	<i>Bird</i>
17. wurawir; (whirrawhi- uh ¹)	23. tewalooeme	6. atsiyéra
16. erwirry	15. hewirwírr	7. {cheeyura
15. -awirr (hewichitt-)	24. wirrawir	7. {achiéra (Gibbs)
8. eyerk	21. apa-quirrh = "tail feather"	9. achiyëra = "small birds"
I. ichquan	18. {wálle	17b. cheeyara
II. goumó	18. {mûséma = "quills"	20. etsiyerre
26. wŭrrawŭrra	20. -ěēmíst (etsiyerre-)	5. teseyérekopaí
	2. mata	23. kewalo
	I. ichquan	4. e-yê'rk
	II. nhamba	8. noosquivira
	16. sohmay sharwattël ²	10. kipay
	26. limith	II. kabto
		13b. ahermá
		16. sohquiah (i in like)
		24. sepa

The comparative list of names for "wing" in the Serian and the Yuman languages exhibits no satisfactory evidence of a genetic relationship between the collated vocables; in like manner there is no phonetic accordance whatever between the terms denoting "feather" in the two groups of words. It seems evident, however, that several of the Yuman words for "wing" and "feather" are phonetically mimetic onomatopes; compare *whirrawhiuh* (17) from Mr Parker's San Tomas Mission Vocabulary, which is evidently an imitative word for the sound made by the wings of a bird (for example, of the California quail) in rapid motion.

In the collated schedule of names for "bird" there is lacking any phonetic accordances indicative of linguistic relationship between the languages compared.

SERIAN

<i>Bone</i>	<i>Leg</i>
A. míttag (like German "mittag")	A. attâ ^a attâqklem = "thigh"
B. hrehiták	B. itahom
C. ittak	C. {hitaxom = "thigh"
D.	C. {hippeχl = "leg"
	D.

YUMAN

15. ák	2. uata (Loew)
24. ak	impadi (White)
24a. ák	1. mópada
25. āk	11. mupata (Renshawe)
26a. ak	19. mpáda
I. hak	6. methílya
23. ĥak	{methilya (Gibbs) = "thigh"
27. hăk	7. {meemay meethilya (?) = "upper leg"
17. ok	10. methil
26b. n'yak	20. emé
18. chiyä'ka	23. eme
21. tciáka	21. emmí
4. escháques	

¹ From Parker's San Tomas Mission Vocabulary, MS. 1876.

² This was rendered, "A white feather worn in the scalp"; in Parker's San Tomas record *táscha-laiemiss* is given for "feather", but it is literally, "bird's hair".

YUMAN—continued

<i>Bone</i>	<i>Leg</i>
7. nieahsark (Mowry)	17. mee
5. shaaks	13. memae
13. yoosak	12. meesith'l
8. inyesake	15. emílye
20. ndchashácq'	4. emistilísh
10. tiága	3. imyliwhy
19. tiága	16. ewhitl
6. uániga	14. iuilgh
3. namsail	24. enyi-wíleh
2. kuévata	18. thimuwála
7. esal-hiwa (Gibbs)	5. eskarowísh
II. acheso (Spanish?)	8. enesaquiwere
16. micashsho	9. himetca-áma = "upper legs"
	11. siminoho (Gilbert)
	I. ma-nyak
	II. gelelepi
	IV. agannapaho (cf. "foot")

An examination of the several names for "bone" in the two groups of terms from the Seri and the Yuman tongues in the comparative list above reveals no trustworthy evidence of linguistic relationship between the two groups.

The same want of agreement between the two groups of terms purporting to denote "leg" in the Serian and the Yuman languages is manifest in the foregoing comparative list.

SERIAN	
<i>Blood</i>	<i>Red</i>
A. á-it	A. ka-ailqt
B. áv't	B. ke-víleh
C. a'vat	C. kēvēχ'l
D.	D. kebls
YUMAN	
9. ahwátam	22. guate
16. ahwhat	9. awhát
21. awhát	16. h'what
12. awhút (Comoyei)	21. awhátěk
25. ā-whūt	12. achawhut
26. a-whāt	25. whūt
14. akhoat	26. whūt
6. neghoata	14. khoat
10. tigval	6. aghóathum
23. t-quat	10. kokhoát
15. h'wat	23. oo-qual
13. hwat ($h = \chi$)	15. h'wát
17. hwat	13. hwat
18. hwat	17. hwat
19. hwat	18. chēhwáta
11. hwa tīgá	19. ahuáti
2a. hūata	27. ěwhūt
3. inuwhal	2a. awáti
8. nichwarte	8. awhát
7. n'yawhart (Mowry)	7. itchahhoata (Mowry)
20. niejuít ($j = \chi$)	20. cuicávojuít

YUMAN—continued

<i>Blood</i>	<i>Red</i>
7. yahwata (Gibbs)	7. echahuāta (Gibbs)
2b. kũalayũ	2b. kalyo
4. ehivetch	4. hivet
5. hiχwítsh	5. χwíttem; gwíttem
I. huat	1. machchuang (=maχχuang)
IV. jueta	II. mocio
II. jued	IV. mokó

At first glance there seems to be some degree of relationship between the groups of terms signifying "blood" and "red" in the Serian and the Yuman tongues. But a discriminating examination of the words of the two collated lists seems to lead to the contrary conclusion.

It may be well to note that the difference between the Serian vocables denoting "blood" and those signifying "red" is that the latter have a prefixed *kă-* or *kě-* sound, in this resembling most other attributive terms in the language. This *kă* or *kě* is probably a pronominal element. The Seri forms of the name for "blood," however, have no initial guttural prefix, and, owing to the lack of historical evidence, it is not possible to declare that the Seri word, as compared with the Yuman terms, has lost an initial guttural aspirate, which is apparently genetic in the Yuman words, as it is present in 27 of the 28 variants of the Diegueño (14) *khoat* and Mohave (9) *ahwat* cited in the list. This is emphasized by the fact that the guttural aspirate remains unchanged whether the term denotes "blood" or, metaphorically, "red". The Yuman word apparently has no distinctively adjective or attributive form. This is evidently in direct contrast with the Seri word, in which the attributive form is initially and terminally different from the form of the word employed as the name for "blood". These considerations strongly militate against the assumed linguistic relationship between the Serian terms denoting, concretely, "blood", and, metaphorically, "red", on the one hand, and the Yuman vocables of like signification on the other.

SERIAN

<i>Yellow (brown)</i>	<i>Green</i>	<i>Black</i>	<i>Blue</i>
A. móssol ^{qt} komassolt (brown)	kóil ^{qlh}	kópolt	kóil ^{qlh}
B. k'másol	kovilch	kopolcht	válch-kopolch
C. kmassolχ'	kovüilχ': χpanams	kopoχ'l (dark)	kovüilχ'
D. kmozol	kobslh	jikopohl (dark- ness) (j=χ)	

YUMAN

I. simarai	manachui	ichehara	changmangchui
II. yembil	mosoo	akal	
2. kũase	ilvi	nya	aveshũve
4. aques	hashamelavi'k	milk	habashũ'ek
5. kwíssem	verrevèrs	nyilk	χaweshũk
6. agoathum	havesug	vanilgh	havasug
7. fokwarthi (Mowry)	havasook	whenyaeelkh	havasook
akwátha (Gibbs)	amatk	hwainyēlk	havasóke
8. akwahum	timahóchi	naailk	avisuk
9. akwátha	habasó	hwanyily	habasó
10. agoathega		nyágh	ashunga
12. aquesque	atsowoo surche	quimele; n'yeelk	hawoo surche

YUMAN—continued

<i>Yellow (brown)</i>	<i>Green</i>	<i>Black</i>	<i>Blue</i>
13. quas	hbsoo	nyil	hbsoo
14. akhoas	kaposhu	nilgh	kaposhu
15. quas	h'pashu	qu'n'ylch	h'pashu
17. quos	hpshoo	nyil	h'pashoo
16. quass	quass	netl	hupshu
18. akwátha	habēsúwi	nyä'chi; nyä	habēsúwi
19. kuáthi	kuáthi	iniä'	havěshúvi
20. accnésque	jabashúc	ñiellgue	m'mai; m'mai cojo-shuñiá
21. aquássük	aquás	hapíli	habışhú
22. akwátha	gawesúwe	nyátie	gawesúwe
23. koosai	emelsoo	nyeg	emelsoo
24.	ahapeshu	qu'nilch	ahapeshú

These comparative schedules of color-names denoting "yellow or brown", "green", "black, darkness", and "blue", collated from the Serian and the Yuman languages, exhibit no phonetic accordances which would be indicative of linguistic kinship between the two groups of languages compared.

It may be of some interest to remark here that the only dialect among the large number compared above that employs the term "sky" for blue is the M'mat (20); in this dialect *m'mái* signifies "sky", while *m'mái* or *m'mai-cojoshuñiá* (literally, "sky color") denotes "blue".

SERIAN

<i>White</i>	<i>Old</i>	<i>Young</i>
A. kó'po ^l	kma'kō'k (man) kūnkai'e (woman)	sepía' (man)
B. kôpcht	ikomákolch	síp
C. kohoχp		
D.	{kmakoj (man) {konkabre (woman)	sip; psip = "boy"

YUMAN

I. tipyche (tipyχ'e)	oosing	wanju
II. calá	acusó	
IV. gala		{whanu="child, young one" {wakna, misprint for wáhna (Laymon)
2. n'shava	velhé (Laymon)	ba (Laymon)
4. hemaál	kuraács	homarsh
5. χemálye	{kureáks (man) {akoís (woman)	mexaís
6. nimesam	kvoraaga	ipa
7. {n'ymahsava (Mowry) {n'yamasába (Gibbs)	{kwirirark (Mowry) {kwarraák (Gibbs)	{mess-ser-haik (Mowry) {messerháik (Gibbs)
8. yimeusavi	quaráki	issintaie="one"
9. nyamasába	{kwadaä'k (man) {kwakuyá (woman) atatayútca="ancestors"	maháia (man)
10. nimesav	patáiga	heméiga
11.	{pagataíya (Gilbert)= "young man" {kamúdümu (Gilbert)= "young woman"	{hamě' (Gilbert)="young man, boy" {mümsi (Gilbert)="young woman, girl"

YUMAN—continued

<i>White</i>	<i>Old</i>	<i>Young</i>
12. hamarlk		
13. hmal	koorchak	amahai
14. nomosháb	umáu	itmam
15. yem'súp	quirrucek	ikutkuspírr
16. nemschap	qurruk	quomiek
17. eemshap	koorak	quel
18. nyuměsábi	{bēlhéi (man) {kūmūhwī'dūmūr (woman)	
19. niměsáva		
20. jamallgue	curaácca (man)	iepac
21. ĩmícápa	{pēlhé (man) {pakí (woman)	pahŭrmŭ'rrě hateč'n (woman)
22. nyemesáwe		
23. umesap	pahtai	pakookeechap
24. nēm'shap	querak	quenacui (woman)
24a. nīr-mishāh	korák	{hequál (man) {hateč'n (woman)

The group of Serian names for the color "white" have no phonetic accordances with the collated Yuman terms of like meaning.

Of the compared groups of Serian and Yuman names for "old" and "young" it may be well to remark that in both some of the terms recorded mean simply "man", "woman", without regard to age, or "large, great man" (Seri A, B, D, and Yuman 6, 9, 10, 21, 23, 24. In number 21 *paki* signifies simply "woman", regardless of age. Yuman number 8 signifies "one", not "young"). This cursory comment shows how untrustworthy much of this material is. It is evident that there is here no proof of genetic linguistic relationship between the Seri and the Yuman languages.

SERIAN

<i>Great, large</i>	<i>Small</i>	<i>Good</i>	<i>Bad, ill</i>
A.		-gehkpa	
B. kakolch	kipk'ha	kípi	homīp; miph'la
C. kakkoχ'	kip'χχa; kissilχ'	χeppe	χ'omipla (kmīplā, "bitter")
D. kakoj			

YUMAN

I. <u>chai</u> , (=χ'ai)	achtawan (=aχá'- tawan), "young"	taip	taipena
II. cáokoo	cánil	ahámi	aminllí (=amiñyi)
IV. ká (Laymon)		{ami {tahipo {tahipe} (Laymon)	{ambiñyi {may (Laymon)
2. {vete (Laymon); {bite	gatye	{khane {ahónni	kalyeve
4. otía	n'yokek	hoátk'	nyoymik
5. wetáym	nokík	χotk	nyomík
6. vataim	itáuk	akhotk	alaik
7. {veltakík (Mow- {ry) {meltaim (Gibbs) {hōmmék="tall"	{anchoik {hitáuk	{ahhoteka {ahōt'k	{munnaik {elhōtmuk; elláik

YUMAN—continued

<i>Great, large</i>	<i>Small</i>	<i>Good</i>	<i>Bad, ill</i>
8. h'watai	echitawa	e p a c h e - h o t i = "good men"	pipach - i l h o t i m = "bad men"
9. veltáia; ohumik = "tall"	hitchaúwa	ahót	alai
10. vatega	ketiga	akhánega	hianomaga
12. oteique	onoc oque	ahotekah; ahotk	haloolk
13. btek	qunnuk	hanna	enoimi
14. igu	iltik	khan	ikútsikhlicht
15. aquacktàie	el mâam	h'hun	w'hlicht
17. quotai	leepist	moohoi	oorap
16. attih	el marm	k'hun	witlicht
18. taya; ta; hémí	kě'chi	háni, hánikûm	kalēpi
19. táyake; vété	kitie	háne	χ'élé'pě
20. bettáie	n'noc	ajótk	l'láie
22. weté	kétye	hané	helépe
23. etai	mootit	mgai	hoogloi
24. ecúy	halyemuck	quahan	qual-hitch

In the comparison of the adjectives "great, large" there is a single apparent accordance between the two groups, and that is between the Cochimi *cáokoo* and the several Serian terms. The Laymon form indicates that the stem is *ka* or *cá*; but an analysis of the Serian words shows that *kolch*, *koχ'* or *koj* (for *koχ'*) is their base, the initial *ka* being merely a pronominal, as may be seen from an inspection of the compared lists of attributives or adjective elements in the Seri groups, including the color-names. Now, Mr Bartlett writes in the same list with *cáokoo*, *calka*, "a lake" = "water, large", accenting the *cá*, "great, large"; and his "small" is *cá-níl* = "great not".

Comparing Dr Gabb's *χai*, "great, large", and *ka* or *cá*, on the one hand, with the Kiliwee *kootai* and *kute* in *sal-kootai* and *pah-kute*, "thumb" or "large finger", and "chief" or "large, great man", and with the Kiliwee *etai*, "great, large" on the other, it becomes evident that *cá* is a curtailed form of *kootai* (*kute*), as *etai* is. The *cáokoo* of Mr Bartlett evidently signifies something more than "large, great"; it may possibly mean "large house"—i. e., *cáuaka*, or "large earth, ground"—i. e., *cáakug*, or it may be a cognate of Gabb's *exkaikang*, "high mountain". But nevertheless its derivation has been demonstrated so as to show that it has nothing in common with Serian terms.

There is likewise no phonetic relationship between the Serian and the Yuman words denoting "small", and this is also true of those signifying "good", "bad", and "ill". These four comparative lists then show no genetic relationship.

SERIAN

<i>Water</i>	<i>Die, dead</i>	<i>Wood, tree</i>
A. ak', hak'	-amükük	ahká-uhkä = "firewood"
B. ache (=aχ')	kochhe	{akáhoke = "wood"
		{eaomtkite
C. aχ' (aχ')	{ikoχχe = "die"	{akaχχ'üküä = "wood"
	{χuaχχ'e = "dead"	{ehe = "a stick, palo"
D. ahj (ahχ')		ehe = "arbol"

YUMAN

I. {kaχ'- (in kachpara, "sea") tasi; desi = "to drink"	epè	{wache = "tree"
II. cal	ybitá	{aput = "wood"
IV. kahal; kalal(?) (Laymon) ibi; yibi		allegcó = "wood"

YUMAN—continued

<i>Water</i>	<i>Die, dead</i>	<i>Wood, tree</i>
1. ahá, aháa	epíga	
2. aha	nevaye; bi="dead"	i-i="tree, wood"
		ihu="tree"
3. niluwhet; hahaw'l		inalch="shrub"
		iya="wood"
4. háche	epúik (ipáik="alive")	emabatách="tree"
		eeêche="wood"
5. χá	epúik	teish="tree"
		iish="wood"
6. akha	ipuik	aí="tree"
7. {ahá	{hippooik="dead"	{ahah="cottonwood"
{ākha (Gibbs)	{hippóik (Gibbs)	{ahee; a-í="wood" (Gibbs)
8. ahá		ichichiwoche="tree"
		a-í="wood"
9. aha	hipúik	ahaá="tree; aí="wood"
10. aháa	apíge	iie="tree"
11. ha	haigopiga (Gilbert)	
12. ahá		éesh="tree"
		e-ee; e-eetch="wood"
13. ha (=χα)	puik	eekwsen; ee="wood"
14. ākha	meley	akhakunau; il="wood"
15. h'ha	mispà	ilye; sin'yauquatai="tree"
16. ahah	mispah	e-ee; e-ee="wood"
17. ha (=χα)	m's'pa	oochoh; ee="wood, pine"
18. ahá, ha	pih	iíh
19. áha, há	bihi; bi; pi	ivi; i-i="wood"
20. já (χ'a)	opúic	eí="wood" and "tree"
21. ahá	ipapí	ii, akiül; iiruba="wood"
22. aha	hepi	
23. aha (=αχα)	paspi	haipak
24. ah'há	mesapá	ily="tree"

All the Serian words denoting "water" are monosyllabic and terminate with the *k*-sound or aspirated guttural *χ*, followed by the breath instant (to which the final *e* of Mr Bartlett's orthography is equivalent). On the other hand, the vocables of the Yuman group of dialects invariably end in a vowel or a double vowel, and, in 24 out of 31 given forms, they are dissyllabic, several being trisyllabic. The Laymon form of the term is evidently the least affected by use, and jointly with the words numbered 5, 6, 7 (Gibbs), 13, 14, 17, and 23, shows the genetic character of the terminal vowel in the given words. These considerations render it probable that the apparently radical resemblance of the collated words is fortuitous and not at all genetic.

In the Serian list of names for "wood" two different words are given, and a third occurs meaning "tree", perhaps "shrub". This third word, *ehe*, is very probably an exotic in the list, and is seemingly of Yuman origin, through its substitution by a Yuman-speaking interpreter for the proper Seri word. The correct term is probably contained in the other word given, *ahkáuhkă*, "firewood" (McGee); *a-ká-hoke*, "wood" (Bartlett); *akaχχ'üküă*, "wood", Spanish "*leña*" (Pinart). The base of the word is evidently *ahka*, *a-ka*, or *aka*, signifying "wood", while *uhka*, *hoke*, or *χχ'üküă*, is the attributive, meaning "dead" (compare *ikoχχe*, "to die", *χuaχχ'e*, "dead", *kochhe*, "dead"). Hence, the compound signifies "dead wood" or "dead timber", and the correct Seri word for "wood" is very probably *ahka*, or *aka*. In

giving the names of the time periods M Pinart records an expression that confirms the foregoing analysis. The word in question *konehexküě ishshaχ'*, which signifies the month in which "se seca el pasto"—i. e., the month "the grass dries, becomes sere". Now, the element, *hexküě* is evidently identical with *χχ'üküă* above, and this rendering should be "the month the grass dies". Thus it would seem that the term *ehe*, not being a native Seri word, does not serve to establish relationship with the Yuman.

The compared list of the Serian and the Yuman vocables purporting to denote "die, dead", show no tokens of relationship.

SERIAN

*Sky (the heavens)**Rain (cloud)*

A.	{	a-mě'm-ma	{	khópka = "rain"; oká ^{lt} ta = "cloud"
		a-měm-ma kwũ-ĩk-pok		
		a-měm-ma kũm-ĩn-kwet-na = "horizon"		kũthla = "fog"
B.		a-mí-me		ip'kakaokuk = "heavy rain" (?)
C.		amimme = "sky, heaven"	{	hipka = "rain, shower"
				χoopka = "it is raining"
				okala kχuanom = "it is cloudy"
D.		ammime	{	ipka = "rain"
				okaxla = "cloud"

YUMAN

21. akwarra	bóka
8. iqui	kowawakochain
2. o'kve okenedia	kivo; kiva, kiwa
3. ama	haishunat
24. amâi	equi
13. amai	k'wus
9. amáia	kubaúk; kubaugě = "it is raining"
12. ammai	muhheé; ikwi = "cloud"
10. amayaá	kivvoga
6. amaya	kovauk
1. hámasia = "heavens"	ékwi mädshiga
23. emmai	quicha
I. embai	
15. mâi	paou
16. mai (i in like)	pow
17. mai	qui
4. mâiche	oaúk
5. maish	
14. may	ikvuy
11. maya (Renshawe)	kw'voga
20. mmái	obáuc
22. meya	
11. miyá (Gilbert)	
7. ummayya	coolowwa; hobauk (Yuma)
ummaía	kobauk
18. ūmiyă'	ikwiwó = "rain"; ikwí = "clouds"
19.	ékwi = "clouds"; tíwo = "rain"; ekwariga = "the sky is cloudy"

While the seeming resemblance between the Yuman terms for “sky, heaven”, and the Serian vocables of the same meaning is more apparent than real, yet the kinship of the Seri with the Yuman group of languages has been conjectured upon data of which this merely fortuitous similarity was made a factor.

The derivation of the characteristic Yuman term *amai*, the variants of which constitute, with the exception of three vocables, the entire list here compared, is evidently from the stem of the Mohave *amail*, “above, on top”, *amaik*, “higher”, the Yavapai *miävi*, “up”, and also the Yuma (Bennett’s MS.), *amiki*, “over”. In the number-names, such as those for “eleven” and “twelve”, this vocable becomes *maik* and *maga* in Maricopa, in Bartlett’s Coco-Maricopa, and in Cochimi, and *maike* in Hummockhave, *amike* in Yuma (Bennett’s MS.), *umaiga* and *umai* in M’mat, *amaik* in Mohave (Gibbs), *mae* in Kutchan, *amaik* in Kutchan (Englehardt), *emmia* in Santa Catalina; in all the number-names in which these variants occur they have a single meaning, namely, “above, over, on top, added to, plus”. Thus it is evident that the Yuman variants of *amai*, “sky, the heavens”, are cognate with the auxiliaries or flexions of number-names cited above. Hence, originally the Yuman concept of the “sky” was “the place above, the higher place, or the place on top”.

The derivation of the Seri vocable *amime* or *amëmma*, “sky, the heavens”, while bearing only a fortuitous resemblance to the Yuman terms noted above, is not traceable from the meager material at present accessible. Strictly speaking, the extent of the phonetic similarity between the Yuman and the Seri vocable is the possession of an *m*-sound in the first syllable, which is evidently the dominant one in the Yuman terms. On the other hand, the Serian vocable has two syllables dominated by the *m*-sound, and the foregoing explanation of the derivation of the Yuman vocable, if correct, as it seems to be, does not supply any means for explaining this duality of syllables dominated by an *m*-sound in the Serian term. For unlike the Yuman dialects of the present the Seri tongue does not duplicate the stem of a word or any part thereof for any purpose whatsoever (though in the past the Seri may or may not have had the duplicative process, for a language can not only do what it is accustomed to do, but may at all times acquire new habits). So it would seem that without historical evidence to support it this comparison is invalid as an indication of linguistic kinship between the vocables compared, and its evidence regarding the conjectured relationship of the two groups of languages is negative.

SERIAN			
<i>Sun</i>	<i>Moon</i>	<i>Fire</i>	<i>Earth</i>
A. sěáh ^k	esschah ^k	a'má'kă	ũmmt; e'k = “dust”
B. schra	isah	amakinoch	am't
C. shaa	ishshaχ'	amak	{ a s h a m t = “c l a y , adobe”
D. rahj; tahj		amak	{ hamt = “the earth” ampte
YUMAN			
I. epang	konga	maahra	ēmat
II. ybo	kaglimbák	usi	akug
III. ibo			
IV. ibo; i b u n g a (Laymon)	gamma; ganehma- jen	usi	amet; ammet
1. inyáa	hăláa	oóo	
2. nyā	h'lá; hallá (White)	hoo; weya (White)	mata
3. inugh	hailiyugh	eya; ahi	muat
4. enn'yache	halyáche	n'yakiém	máche
5. nyas	χilás; χalásh	ahaus	mát
6. anyá	halyá	aáua	amata

YUMAN—continued

<i>Sun</i>	<i>Moon</i>	<i>Fire</i>	<i>Earth</i>
7. { unya { unyá (Gibbs)	{ huala { hálla (Gibbs)	{ ahowwa { aáuwa (Gibbs)	{ amata { am-má-ta (Gibbs)
8. anya	halya	chiwaswe	á-i
9. anyá	hálya	aáuwa	amat; teiáma
10. inyaá	halá a	tuga	mat
11. nya (Gilbert)	hla (Gilbert)	otoga (Gilbert)	
12. m'yatche	huth'lya; hullyar	aáwo	ōmut amáth (Bennett)
13. huya; hnya?	halla	ow	a-má-ta
14. inyá	khilshiá	áua	mat
15. n'ya	hulchyá	aáou	mut
16. enyah	hutl'yah	quu	mut
17. nya	h'kla	matuanap	mot
18. nyä	halá	oóh	mat; amát; máte
19. nyávi; nyá	'láwe; 'lá	óo	amat; mata
20. nyá	jellá	aáu	h'mát
21. n'ya	hüllá	áá; itshi = "coals"	mät
22. enya	halá	ohó	
23. eñai	hala	aau	omot
24. enn'yachipáp	helchhyá	aáou	umát

The comparative schedules of the Serian names for "sun" and "moon" exhibit no phonetic evidence of genetic relationship with the collated lists of Yuman vocables of like import.

Between the Serian names for "fire" and the Yuman terms of like import there is no phonetic accordance indicative of glottologic kinship.

It has been supposed, and not without a measure of possibility, that a radical relationship exists between the Serian and the Yuman words denoting "earth". The supposition rests on the approximate phonetic accordance of two consonants occurring in these terms, quite regardless of the vowel sounds that render them intelligible. The four Seri authorities are in close accord in not hearing and recording a vowel sound between the *m* and the following *t*. This final *t* is apparently explosive, indicated by Mr Bartlett with a prefixed apostrophe and by Sr Tenochio with an *e*, whose final position would make it faint. The initial *h* of the record of M Pinart is very probably due to the Yuman-speaking interpreter. Now, in the 26 forms of the Yuman word here collated the vowel intervening between the *m* and *t* of the Yuman vocable is strong and characteristic, and in 11 instances it is accented. While the Seri forms are monosyllables, 17 of the 28 Yuman examples are dissyllabic and 3 are trisyllables. The Cocopa *muat* indicates the persistency of the medial vowel. These differences, admittedly but poorly indicated by the faulty alphabets employed by the several word collectors, are important and significant; were the several terms here compared faithfully recorded as spoken, by means of a discriminative phonetic alphabet, it seems probable that these literal accordances, in view of the marked differences noted above, would disappear. So in the absence of historical evidence of the genetic relationship of the Serian and the Yuman words denoting "earth", it seems best to regard this literal accordance as fortuitous rather than real or genetic.

SERIAN

<i>Dog</i>	<i>Coyote</i>	<i>Wolf</i>
A.		
B. achks		hashokévlch. = "red hasho"
C. aχ'sh	vootth	χ'ekkos
D.	boot	

	PIMAN	
<i>Dog</i>	<i>Coyote</i>	<i>Wolf</i>
a. cox (Pima, White)		serr
b. yocsi (Nevome)	vana	suhi
c. koks (Pima)	pan	
d. kocks (Opata)	guo	
	YUMAN	
I. ethatta	etadwachetibawaha	(etadwachetibawaha)
II. masa		
1. uhát	kathâ't	
2. tsata	kethuda	mbá
3. cowwaick		
4. hatch		hatakúltis
5. χát	χatelwís; χatelwísh	χattekúltis
6. akhatchora		huksara
7. {hotchóuk		hooktharu
{hatchóka (Gibbs)	hūkthara (Gibbs)	
8. hachochoke	hookhare	
9. hatcâka (pl. hatcâk- tea)	hukçára	
10. akhat		gesat
11. hot; ahat (Renshawe)	kthat; cathă't (Renshawe)	
12. hoowée		
13. ahatchookachook	ahateleeway	
14. khat		
15. h'hút		hutch'kôlk
16. hotchukchuk		hutchpah
17. ahot	ahotoopai	
18. kuthá'rt	kuthá'rt hána	
19. katháta		nimmíta (nimiwi)
20. jatsocsóc		jatelué
21. a'hat; ahüt		
22. kehér		
23. itat	milti	latkil
24. h'hut		h'takulch
huwi. (Kutchan, Bart- lett)		

The comparative list of names for "dog" shows that the Seri term was very probably adopted from the Piman group of tongues, and there is therefore no apparent relation between the Serian and the Yuman terms.

The Serian name for "coyote" shows no kinship with the Yuman names for this animal.

The Serian names for "wolf", *χ'ekkos* and *hasho-kévlch* (= "red hasho"), show no apparent linguistic relationship to the Yuman names for this animal. It is possible that the Serian terms have some affinity to the Piman terms for "dog" and "wolf".

Notwithstanding the unqualified conclusion of Herr J. C. E. Buschmann as to the separateness of the Waïcuri (Guaicuri), the late Dr Daniel G. Brinton, in positive terms, though from adverse evidence deduced from precarious data, included this and the Seri tongue in the Yuman stock of languages. Speaking of a comparative list of words specially selected from the Cochimi, Waïcuri, Seri, and Yuma, he says: "The above vocabularies illustrate the extension of the Yuman stock to the southward. The Cochimi and Waïcuri are remote dialects, but of positive affinities."¹ Yet of seven terms selected by him from the Waïcuri to prove these

¹The American Race, p. 335.

"positive affinities" not one has any phonetic accordance with the term with which it is compared. This, it would seem, should have sufficed to eliminate the Waïcuri from the Yuman stock. Pending further research, this language should stand independently.

Of the conjectured glottologic kinship of the Seri to the Yuman stock Dr Brinton says:¹ "The relationship of the dialect to the Yuman stock is evident." Yet out of twenty-one terms which he chose to exhibit the grounds of his faith only six (those for "tongue", "eye", "head", "water", "man", and "teeth") show any definite phonetic resemblance. This number, however, can certainly be reduced by careful scrutiny. Thus, he cites the Laymon and Cochimi *tamá* as a cognate of the Seri *eketam*. The Laymon and Cochimi term, it must be remembered, does not occur in this form in a single other tongue admittedly Yuman. Now, before this vague resemblance can establish relationship it must first be shown that the terms compared have a common linguistic tradition and that a form of *tamá* is or has been an element common to the other dialects of the Yuman group. But an analysis of the Cochimi term shows no trustworthy ground for considering these terms related. So this certainly reduces the number of conjectured accordances to five.

Comparison is made by Dr Brinton between the Serian *ata'st* (*ítast*, *hitast*), "tooth" and "teeth" (collectively), and the vocable *ehdoh* (Lieutenant Bergland's), "tooth", variants of which are common to only three of the twenty-odd Yuman dialects. He made this comparison evidently under the impression that the first part of the Seri term *ata'st* (*ítast*, *hitast*) signifies "tooth". But such is not the fact. The first part of this Seri vocable signifies "mouth" (as may be seen in the discussion of the comparative list of names for "tooth") and the latter part "stone". The term *ítast*, "tooth", is, therefore, literally "stone of the mouth". This is certainly not the signification of the Yuman terms, and so the comparison is invalid, and the number of apparent accordances is reduced to four. By some oversight it seems Dr Brinton omitted from this comparison the Cochimi *hastaá*, "tooth"; but this collocation has been made by others. Now, this term *hastaá* belongs exclusively to the Cochimi dialect, and before becoming a means of comparison would have to be shown to be a vocable common to the body of Yuman terms having a common linguistic tradition, which has not been done. Moreover, the phonetic obstacles barring a way to a fruitful comparison of this term with the Serian are quite insuperable—the assumed loss of the first half of the Seri term, the acquirement by the Cochimi of the initial *h* sound and of the final accented syllables *-aá*, or the converse process. This, it seems safe to say, renders this comparison likewise invalid.

The Seri term *intlāsh*, "hand", has certainly no phonetic accordance with the peculiar Yuman *israhl*, which is from the Yuma or Kutchan record of Lieutenant Eric Bergland, nor, indeed, has it any accordance with any other Yuman term for hand. The presence of the *r* sound in it supplies the peculiar feature of the term; but it may be used only to lengthen the following vowel (though this is only an assumption). This form is peculiar because there is none like it in about thirty Yuma vocabularies, representing about twenty dialects, in the archives of the Bureau of American Ethnology. A careful inspection of the comparative list of the Seri and the Yuman names for "arm", "hand", "finger", "thumb", and "fingernail" will demonstrate the utter futility of the comparison under consideration, for there is no accordance between the Seri and the Yuman terms.

Elsewhere herein, in discussing the terms for "head" and "hair", "eye", "tongue", and "water", it is shown that there is no apparent linguistic relationship between the Serian terms on the one hand and the Yuman on the other, and those explanations dissipate entirely the suspected accordances of Dr Brinton.

¹ Loc. cit.

CALENDAR HISTORY OF THE KIOWA INDIANS

BY

JAMES MOONEY

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OF THE PLAINS TRIBES IN 1832 WITH THEIR KIOWA NAMES

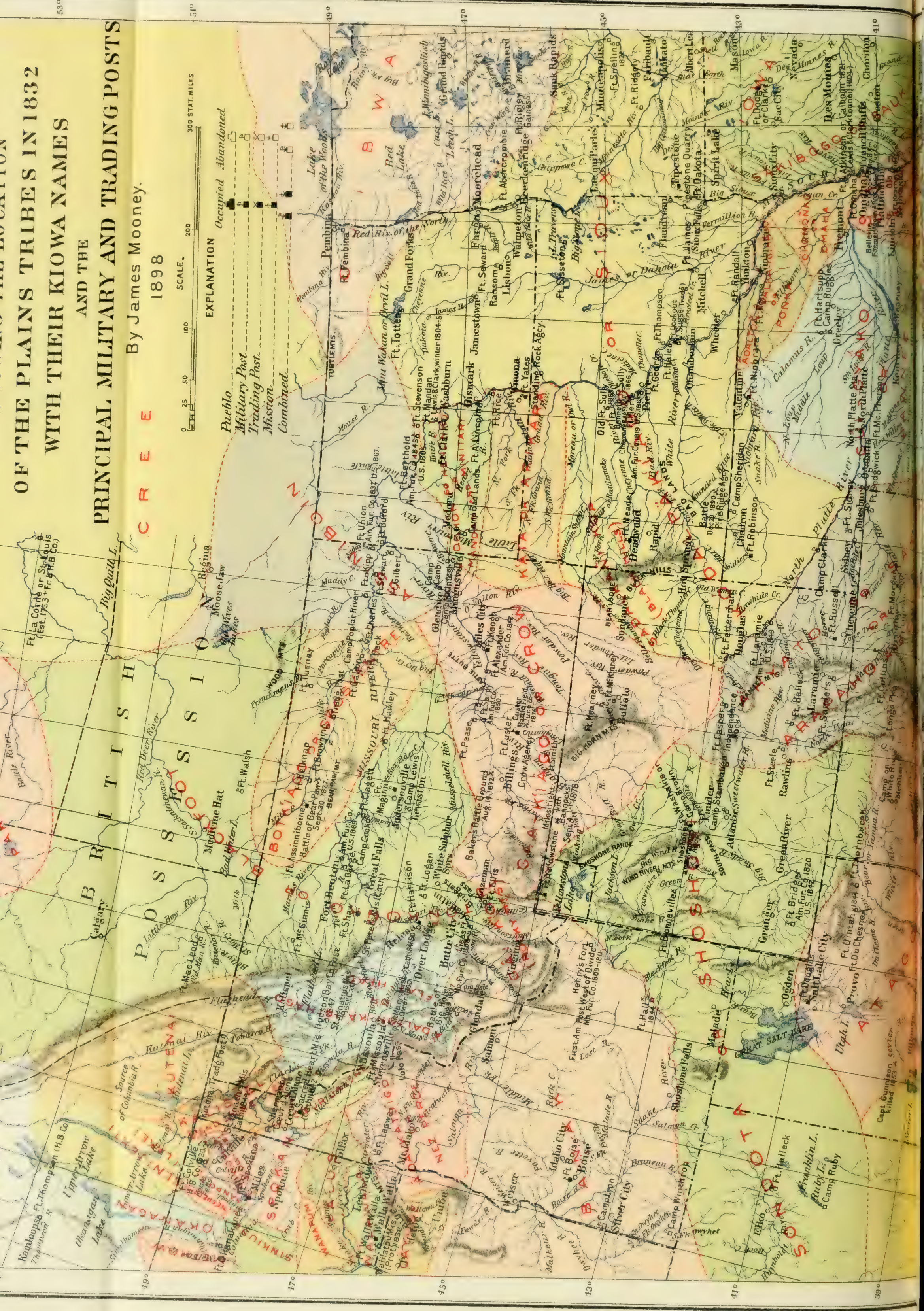
PRINCIPAL MILITARY AND TRADING POSTS

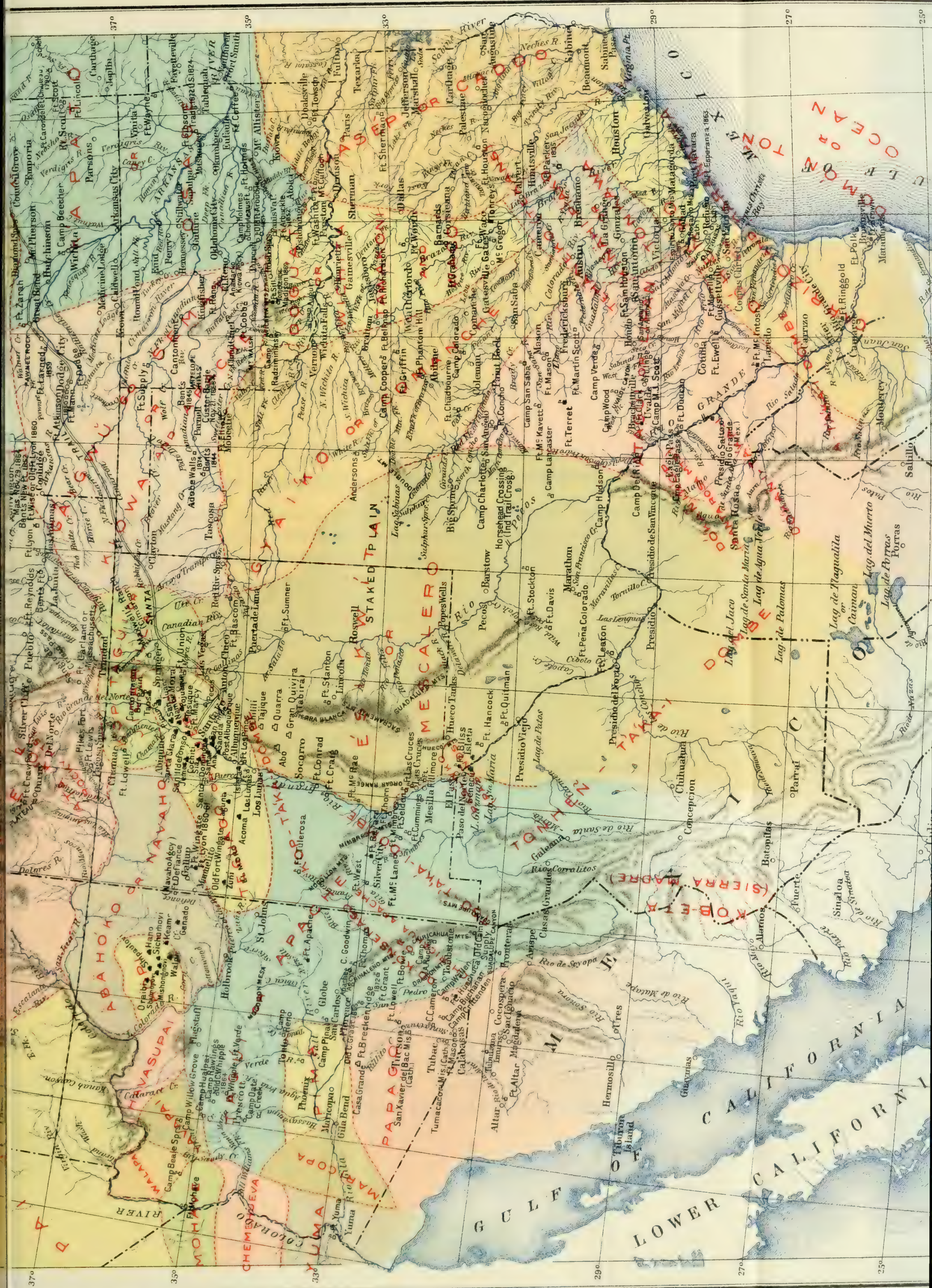
By James Mooney.
1898

C R E E



EXPLANATION
Pueblo
Military Post
Trading Post
Mission
Combined
Occupied
Abandoned





CALENDAR HISTORY OF THE KIOWA INDIANS

By JAMES MOONEY

INTRODUCTION

AGE OF ABORIGINAL AMERICAN RECORDS

The desire to preserve to future ages the memory of past achievements is a universal human instinct, as witness the clay tablets of old Chaldea, the hieroglyphs of the obelisks, our countless thousands of manuscripts and printed volumes, and the gossiping old story-teller of the village or the backwoods cabin. The reliability of the record depends chiefly on the truthfulness of the recorder and the adequacy of the method employed. In Asia, the cradle of civilization, authentic history goes back thousands of years; in Europe the record begins much later, while in America the aboriginal narrative, which may be considered as fairly authentic, is all comprised within a thousand years.

ABORIGINAL AMERICAN CALENDARS

The peculiar and elaborate systems by means of which the more cultivated ancient nations of the south recorded their histories are too well known to students to need more than a passing notice here. It was known that our own tribes had various ways of depicting their mythology, their totems, or isolated facts in the life of the individual or nation, but it is only within a few years that it was even suspected that they could have anything like continuous historical records, even in embryo.

The fact is now established, however, that pictographic records covering periods of from sixty to perhaps two hundred years or more do, or did, exist among several tribes, and it is entirely probable that every leading mother tribe had such a record of its origin and wanderings, the pictured narrative being compiled by the priests and preserved with sacred care through all the shifting vicissitudes of savage life until lost or destroyed in the ruin that overwhelmed the native governments at the coming of the white man. Several such histories are now known, and as the aboriginal field is still but partially explored, others may yet come to light.

THE WALAM OLUM OF THE DELAWARES

East of the Mississippi the most important and best known record is the *Walam Olum* or "red score" of the Delawares, originally discovered in 1820, and published by Dr D. G. Brinton in 1885. It consists of a series of pictographs designed to fix in memory the verses of a genesis and migration chant which begins with the mythic period and comes down to the advent of the whites about the year 1610. It appears to be genuine and ancient, although the written chant as we find it contains modern forms, having of course been reduced to writing within a comparatively recent period.

It is said that the Cherokee seventy years ago had a similar long tribal tradition which was recited by the priests on ceremonial occasions. If so, it was probably recorded in pictographs, but tradition and record alike are now lost.

THE DAKOTA CALENDARS

West of the Mississippi the first extended Indian calendar history discovered was the "Lone-dog winter count," found among the Dakota by Colonel Garrick Mallery, and first published by him in 1877. This history of the Dakota was painted on a buffalo robe by Lone-dog, of the Yanktonai tribe of that confederacy, and extends over a period of seventy-one years, beginning in 1800. Subsequent investigation by Colonel Mallery brought to light several other calendars in the same tribe, some being substantially a copy of the first, others going back, respectively, to 1786, 1775, and the mythic period.

In all these Dakota calendars there is only a single picture for each year, with nothing to mark the division of summer and winter. As they call a year a "winter," and as our year begins in the middle of winter, it is consequently impossible, without some tally date from our own records, to know in which of two consecutive years any event occurred, i. e., whether before or after New Year. In this respect the Kiowa calendars here published are much superior to those of the Dakota.

OTHER TRIBAL RECORDS

Clark, in his book on Indian sign-language, mentions incidentally that the Apache have similar picture histories, but gives no more definite information as concerns that tribe. He goes on to say that the Santee Sioux claim to have formerly kept a record of events by tying knots in a string, after the manner of the Peruvian quipu. By the peculiar method of tying and by means of certain marks they indicated battles and other important events, and even less remarkable occurrences, such as births, etc. He states that he saw among them a slender pole about 6 feet in length, the surface of which was completely covered with small notches, and the old Indian who had it assured him that it had been handed down from father to son for many generations,

and that these notches represented the history of his tribe for more than a thousand years, going back, indeed, to the time when they lived near the ocean (*Clark, 1*).¹ In this case the markings must have been suggestive rather than definite in their interpretation, and were probably used in connection with a migration chant similar to that of the Walam Olum.

THE KIOWA CALENDARS

THE ANNUAL CALENDARS OF DOHÁSÄN, POLÄÑ'YI-KATÓN, SETT'AN, AND ANKO

So far as known to the author, the Dakota calendars and the Kiowa calendars here reproduced are the only ones yet discovered among the prairie tribes. Dodge, writing in 1882, felt so confident that the Dakota calendar of Mallery was the only one ever produced by our Indians that he says, "I have therefore come to the conclusion that it is unique, that there is no other such calendar among Indians. . . . I now present it as a curiosity, the solitary effort to form a calendar ever made by the plains Indians" (*Dodge, 1*). Those obtained by the author among the Kiowa are three in number, viz: the Sett'an yearly calendar, beginning with 1833 and covering a period of sixty years; the Anko yearly calendar, beginning with 1864 and covering a period of twenty-nine years; and the Anko monthly calendar, covering a period of thirty-seven months. All these were obtained in 1892, and are brought up to that date. The discovery of the Anko calendars was an indirect result of having obtained the Sett'an calendar.

A fourth Kiowa calendar was obtained in the same year by Captain H. L. Scott, Seventh cavalry, while stationed at Fort Sill, Oklahoma, on the Kiowa reservation, and was by him generously placed at the disposal of the author, together with all his notes bearing on the subject. This calendar was procured from Dohásän, "Little-bluff," nephew of the celebrated Dohásän who was head chief of the Kiowa tribe for more than thirty years. The nephew, who died in 1893 at an advanced age, told Captain Scott that the calendar had been kept in his family from his youth up, having originally been painted on hides, which were renewed from time to time as they wore out from age and handling. The calendar delivered by him to Scott is drawn with colored pencils on heavy manila paper, as is also the Sett'an calendar obtained by the author. In both, the pictographs are arranged in a continuous spiral, beginning in the lower right-hand corner and ending near the center, the rows of pictographs being separated from each other by a continuous spiral. In both, the winter is designated by means of an upright black bar, to indicate that vegetation was then dead, while summer is represented by means of the figure of the medicine lodge, the central object of the annual summer religious ceremony.

¹ See the list of authorities cited at the end of the memoir.

The leading event of the season is indicated by means of a pictograph above or beside the winter mark or medicine lodge. In a few instances, in the earlier years, when the medicine dance was omitted, the event recorded for the summer is placed between the consecutive winter marks, without anything to show the season, but toward the end, when the medicine dance had been practically discontinued, the summer is indicated by the figure of a tree in foliage.

The general plan of the Anko calendar is the same, excepting that the winter pictographs are below the winter marks, with which they are connected by lines, the winter marks forming a single row across the page, with the center pole of the medicine lodge, the summer pictographs above and the winter pictographs below. This calendar was originally drawn with a black pencil in a small notebook, and afterward, by direction of the author, redrawn in colored inks on buckskin. A comparison of the three justifies the assertion that the Kiowa have a recognized system of calendar pictography. In artistic execution the Sett'an calendar ranks first.

Still another calendar, thought to have dated farther back than any of those now under consideration, was kept by an old man of the Kiowa Apache named Polä'ñyi-katón, "Rabbit-shoulder," and is supposed to have been buried with him at his death, a few years ago.

From the evidence it is probable that the first calendar within the present knowledge of the Kiowa was kept by the old chief Dohä'sän, whose hereditary tipi occupied the first place in the camp circle of the tribe, and in whose family certain priestly functions in connection with the medicine dance descended in regular succession. After his death in 1866 it was continued and brought down to date by his nephew and namesake, whose last revision is now in possession of Captain Scott.

The Sett'an calendar is an inspiration, but not a copy, from the Dohäsän calendar, of which it is almost an exact duplicate, but with the addition of one or two pictographs, together with greater skill and detail in execution. Sett'an stated that he had been fourteen years drawing it; i. e., that he had begun work on it fourteen years before, noting the events of the first six years from the statements of older men, and the rest from his own recollection. He knew of the Dohäsän calendar, although he claimed never to have seen it, but from internal evidence and from the man's general reputation for untruthfulness it is probable that he had seen it sufficiently often to be able to reproduce it from memory.

This will be understood when it is explained that it is customary for the owners of such Indian heirlooms to bring them out at frequent intervals during the long nights in the winter camp, to be exhibited and discussed in the circle of warriors about the tipi fire. The signal for such a gathering takes the form of an invitation to the others to "come and smoke," shouted in a loud voice through the camp by the leader of the assemblage while standing in front of his tipi, or even without

passing outside, his voice easily being heard through the thin walls and the smoke-hole of the lodge. At these gatherings the pipe is filled and passed around, and each man in turn recites some mythic or historic tradition, or some noted deed on the warpath, which is then discussed by the circle. Thus the history of the tribe is formulated and handed down.

Sett'an, "Little-bear," who is a cousin of the old war-chief, in whose family the author makes his home when with the tribe, voluntarily brought in and presented the calendar without demanding any payment in return, saying that he had kept it for a long time, but that he was now old and the young men were forgetting their history, and he wanted it taken to Washington and preserved there with the other things collected from the tribe, that the white people might always remember what the Kiowa had done.

THE ANKO MONTHLY CALENDAR

The original monthly calendar of Anko (abbreviated from *Ankopáá-iñgyadéte*, "In-the middle-of-many-tracks") was drawn in black pencil in a continuous spiral, covering two pages of the notebook in which his yearly calendar was recorded, and was redrawn by him in colored inks, under the inspection of the author, on the same buckskin on which the other was reproduced. It begins in the lower left-hand corner. Each moon or month is represented by a crescent, above which is a pictograph to indicate the event, or the name of the moon, and sometimes also straight tally marks to show on what day of the month the event occurred or the picture was drawn. So far this is the only monthly calendar discovered among North American tribes, but since the original was obtained, Anko has made another copy for his own use and continued it up to date. His young wife being far advanced in consumption, he spends most of his time at home with her, which accounts in a measure for his studious habit. On the later calendar he has noted with anxious care every hemorrhage or other serious incident in her illness and every occasion when he has had ceremonial prayers made for her recovery.

COMPARATIVE IMPORTANCE OF EVENTS RECORDED

An examination of the calendars affords a good idea of the comparative importance attached by the Indian and by the white man to the same event. From the white man's point of view many of the things recorded in these aboriginal histories would seem to be of the most trivial consequence, while many events which we regard as marking eras in the history of the plains tribes are entirely omitted. Thus there is nothing recorded of the Custer campaign of 1868, which resulted in the battle of the Washita and compelled the southern tribes for the first time to go on a reservation, while the outbreak of 1874, which terminated in their final subjugation, is barely noticed. On the other

hand, we find noted such incidents as the stealing of a horse or the elopement of a woman. The records resemble rather the personal reminiscences of a garrulous old man than the history of a nation. They are the history of a people limited in their range of ideas and interests, such materials as make up the chronicles of the highland clans of Scotland or the annals of a medieval barony.

It must be remembered, however, that an Indian tribe is simply a large family, all the members being interrelated; this is particularly true of the Kiowa, who number only about 1,100. An event which concerns one becomes a matter of gossip and general knowledge in all the camps and is thus exalted into a subject of tribal importance. Moreover, an event, if it be of common note in the tribe, may be recorded rather for its value as a tally date than for its intrinsic importance.

On this point Mallery says, speaking of the Lone-dog calendar, that it "was not intended to be a continuous history, or even to record the most important event of each year, but to exhibit some one of special peculiarity. . . . It would indeed have been impossible to have graphically distinguished the many battles, treaties, horse stealings, big hunts, etc, so most of them were omitted and other events of greater individuality and better adapted for portrayal were taken for the year count, the criterion being not that they were of historic moment, but that they were of general notoriety, or perhaps of special interest to the recorders" (*Mallery*, 1).

A brief interpretation of the calendars here described was obtained from the original owners in 1892. To this was added, in the winter of 1894-95, all that could be procured from T'ébodál, Gaápiatañ, Â'dal-pepte, Set-ĩnkía, and other prominent old men of the tribe, together with Captain Scott's notes and the statements of pioneer frontiersmen, and all available printed sources of information, including the annual reports of the Commissioner of Indian Affairs for more than sixty years. The Dohásän calendar is still in possession of Captain Scott. The Sett'an and Anko calendars are now deposited in the Bureau of American Ethnology.

METHOD OF FIXING DATES

A few examples will show how the Kiowa keep track of their tribal and family affairs by means of these calendars. Sett'an was born in "cut-throat summer" (1833), and his earliest recollection is of the "head-dragging winter" (1837-38). Set-ĩnkía, better known as Stumbling-bear, was about a year old in "cut-throat summer" (1833). He was married in "dusty medicine dance" summer (1851). His daughter Virginia was born in the summer of "No-arm's river medicine dance" (1863), and her husband was born a little earlier, in "tree-top winter" (1862-63). Guñsádalte, commonly known as Cat, was born in the "winter that Buffalo-tail was killed (1835-36); his son Angópte

was born in "muddy traveling winter" (1864-65), and his younger son Másép was born in "bugle scare winter" (1869-70). Paul Setk'opte first saw light among the Cheyenne the winter after the "showery medicine dance" (1853), and joined the Kiowa in the autumn after the "smallpox medicine dance" (1862).

SCOPE OF THE MEMOIR

As the Kiowa and associated Apache are two typical and extremely interesting plains tribes, about which little is known and almost nothing has been printed, the introductory tribal sketch has been made more extended than would otherwise have been the case. As they ranged within the historic period from Canada to central Mexico and from Arkansas to the borders of California, they came in contact with nearly all the tribes on this side of the Columbia river region and were visitors in peace or war at most of the military and trading posts within the same limits. For this reason whatever seemed to have important bearing on the Indian subject has been incorporated in the maps with the purpose that the work might serve as a substantial basis for any future historical study of the plains tribes.

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SKETCH OF THE KIOWA TRIBE

TRIBAL SYNONYMY

Be'shiltcha—Na-isha Apache name.

Datümpa'ta—Hidatsa name, according to old T'ebodal. Perhaps another form of *Witapähätu* or *Witapätu*, q. v.

Gá'-i-gwǔ—The proper name as used by the tribe, and also the name of one of the tribal divisions. The name may indicate a people having two halves or parts of the body or face painted in different colors (see the glossary). From this come all the various forms of Caygua and Kiowa.

Cahiaguas—Escudero, Noticias Nuevo Mexico, 87, 1849.

Cahiguas—Ibid., 83.

Caiawas—H. R. Rept., 44th Cong., 1st sess., I, 299, 1876.

Caigua—Spanish document of 1735, title in Rept. Columbian Hist. Exposition, Madrid, 323, 1895.

Caihuas—Document of 1828, in Soc. Geogr. Mex., 265, 1870. This form occurs also in Mayer, Mexico, II, 123, 1853.

Caiwas—American Pioneer, I, 257, 1842.

Cargua—Spanish document of 1732, title in Rept. Columbian Hist. Exp., Madrid, 323, 1895 (for Caigua).

Cayanwa—Lewis, Travels, 15, 1809 (for Cayauwa).

Caycuas—Barreiro, Ojeada Sobre Nuevo Mexico, app., 10, 1832.

Cayguas—Villaseñor, Teatro Americano, pt. 2, 413, 1748. This is the common Spanish form, written also Caygüa, and is nearly identical with the proper tribal name.

Cayugas—Bent, 1846, in California Mess. and Corresp., 193, 1850 (for Cayguas).

Ciawis—H. R. Rept., 44th Cong., 1st sess., I, 299, 1876.

Gahe'wǎ—Wichita name.

Gai'wa—Omaha and Ponka name, according to Francis La Flesche.

Kaiawas—Gallatin, in Trans. Am. Eth. Soc., II, 20, 1848.

Kaí-ó-wás—Whipple, Pacific Railroad Report, pt. I, 31, 1856.

Kaiowan—Hodge, MS. Pueblo notes, 1895, in Bur. Am. Eth. (Sandia name).

Kaiowe'—Powell *fide* Gatschet, Sixth Ann. Rept. Bur. Eth., xxxiv, 1888.

Kaí-wa—Comanche name, from the proper form *Gá'-i-gǔa*. As the Comanche is the trade language of the southern plains, this form, with slight variations, has been adopted by most of the neighboring tribes and by the whites. The same word in the Comanche language also signifies "mouse." The form *Kai-wa* is that used by the Pueblo Indians of Cochiti, Isleta, San Felipe, and Santa Ana—Hodge, MS. Pueblo notes, 1895, in Bur. Am. Eth.

Kai-wane'—Hodge, MS. Pueblo notes, 1895, in Bur. Am. Eth. (Picuris name).

Kawas—Senate Ex. Doc. 72, 20th Cong., 104, 1829. *Kawa*—La Flesche, Omaha MS. in Bur. Am. Eth. (Omaha name).

Kayaguas—Bent, 1846, in House Doc. 76, 30th Cong., 1st sess., 11, 1848.

Kayaways—Pike, Expedition, app. III, 73, 1810.

Kayowa—Gatschet, Kaw MS., 1878, in Bur. Am. Eth. (Kaw and Tonkawa name).

Ka'yowe'—Gatschet, in American Antiquarian, IV, 281, 1881.

Kayowú—Grayson, Creek MS. in Bur. Am. Eth., 1886 (Creek name).

Kayuguas—Bent, 1846, in Schoolcraft, Indian Tribes, I, 244, 1851.

Ka'yuwa—Dorsey, Kansas MS. Voc., 1882, in Bur. Am. Eth. (Kaw name).

Keawas—Porter, 1829, in Schoolcraft, Indian Tribes, III, 596, 1853.

Keaways—Farnham, Travels, 29, 1843.

Ki'-á-wá—Lewis, Report, 1805, in Mess. from the President Communicating Discoveries by Lewis and Clark, etc, 37, 1806.

Kiaways—Gallatin, in Trans. American Ethn. Soc., II, cvii, 1848.

Kinawas—Gallatin, in Trans. American Antiq. Soc., II, 133, 1836 (misprint).

Kiniwas—Wilkes, U. S. Exploring Exped., IV, 473, 1845 (misprint).

Kiovas—Möllhausen, Journey to the Pacific, I, 158, 1858 (misprint).

Kiowas—Rept. Comm'r Ind. Affairs, 240, 1834. This is the American official and geographic form; pronounced *Kai'-o-wa*.

Kiowahs—Davis, El Gringo, 17, 1857.

Kioways—Brackenridge, Views of Louisiana, 80, 1814.

Kiwaa—Kendall, Santa Fé Ex., I, 198, 1844 (given as the pronunciation of *Caygüa*).

Kuyawas—Sage, Scenes in the Rocky Mountains, 167, 1846.

Kyaways—Pike (1807), Expedition, app. II, 16, 1810.

Riana—Kennedy, Texas, I, 189, 1841 (double misprint).

Ryawas—Morse, Rept. on Ind. Aff., app., 367, 1822 (misprint).

Ryuwas—Brackenridge, Views of Louisiana, 85, 1814 (misprint).

Ko'mpabi'ánta—"Large tipi flaps," a name sometimes used by the Kiowa to designate themselves.

Kompa'go—An abbreviated form of *Ko'mpabi'ánta*.

Kwu'dǎ'—"Coming out," or "going out;" the most ancient name by which the Kiowa designated themselves. See *Te'pdǎ'*.

Na'la'ni—"Many aliens," or "many enemies;" the collective Navaho name for the southern plains tribes, particularly the Comanche and Kiowa.

Nǐ'chihině'na—"Rivermen," the Arapaho name, from *nǐ'chia* river and *hině'na* (singular *hině'n*) men. The Kiowa are said to have been so called from their long residence on the upper Arkansas.

Ni-ci'-he-nen-a—Hayden, Ethn. and Phil. Missouri Valley, 326, 1862.

Nitchihi—Gatschet in American Antiquarian, IV, 281, 1881.

Shi'sh-i-nu'-wut-tsi't-a-ni-o—Hayden, Ethn. and Phil. Missouri Val., 290, 1862. Improperly given as the Cheyenne name for the Kiowa and rendered "rattlesnake people." The proper form is *Shǐ'shǐnu'wut-tsítäni'u*, "snake [not rattlesnake] people," and is the Cheyenne name for the Comanche, not the Kiowa, whom the Cheyenne call *Witapǎ'tu*. The mistake arose from the fact that the Comanche and Kiowa are confederated.

Te'pdǎ'—"Coming out," "going out," "issuing" (as water from a spring, or ants from a hole); an ancient name used by the Kiowa to designate themselves, but later than *Kwu'da*, q. v. The two names, which have the same meaning, may refer to their mythic origin or to their coming into the plains region. The name *Te'pdǎ'* may have been substituted for *Kwu'da*, in accordance with a custom of the tribe, on account of the death of some person bearing a name suggestive of the earlier form.

Tepk'i'nägo—"People coming out," another form of *Te'pdǎ'*.

Wi'tapähä'tu—The Dakota name, which the Dakota commonly render as people of the "island butte," from *wita*, island, and *pähä*, locative *pähäta*, a butte. They are unable to assign any satisfactory reason for such a name. See *Witapähät*.

T'häpet'häpa'yit'he—Arbuthnot letter in Bur. Am. Eth. (given as the Cheyenne name for the Kiowa).

Vi'täpǎ'tu'i—Name used for the Kiowa by the Sutaya division of the Cheyenne.

Watahpahata—Mallery in Fourth Ann. Rep. Bur. Eth., 109, 1886.

Wate-pana-toes—Brackenridge, Views of Louisiana, 85, 1814 (misprint).

Watepaneto—Drake, Book of Indians, xii, 1848 (misprint).

Wetahato—Lewis, Travels, 15, 1809 (misprint).

Wetapahato—Lewis and Clark, Expedition, Allen ed., I, 34, map, 1814.

We-te-pâ-hâ'-to—Lewis, Report, 1805, in Mess. from the President Communicating Discoveries by Lewis and Clark, etc, 36, 1806. (Incorrectly given as distinct from the Kiowa, but allied to them.)

Wetopahata—Mallery, in Fourth Ann. Rep. Bur. Eth., 109, 1886.

Wettaphato—Morse, Report on Indian Affairs, app., 366, 1882.

Wi'tăpähät, *Wităp'ätu*—Cheyenne forms, derived from the Dakota form *Witapähätu*, or vice versa. The Dakota render the name "island butte." Attempts have been made to translate it from the Cheyenne language as people with "cheeks painted red" (*wi'tapa*, red paint; *tu*, cheek bone), but there is no evidence that this habit was specially characteristic of the Kiowa. It may possibly be derived from the ancient name *Te'pdă'*, q. v.

Wi'-ta-pa-ha—Riggs-Dorsey, Dakota-English Dictionary, 579, 1890.

TRIBAL SIGN

To make the sign for "Kiowa" in the sign language of the plains tribes, the right hand is held close to the right cheek, with back down, fingers touching and slightly curved, and the hand moved in a rotary motion from the wrist. According to the Kiowa this sign had its origin in an old custom of their warriors, who formerly cut the hair from the right side of the head, on a line with the base of the ear, in order better to display the ear pendants, while allowing it to grow to full length on the left side, so as to be braided and wrapped with otter skin after the common fashion of the southern plains tribes. This was in addition to the ordinary small scalp-lock hanging down behind. This style of wearing the hair, although now nearly obsolete from long association with tribes of different habit, is still occasionally seen. It is shown in the picture of the chief Big-bow, taken in 1870 (figure 43).

Dodge thus correctly explains the sign: "KIOWA—The open palm, held bowl-shaped, to right of and beside the face, is passed round and round in a circle. Supposed to indicate the peculiarity of these Indians in cutting the hair of the right side of the head" (*Dodge*, 2).

The sign has no connection with the idea of "rattle-brain," "crazy head," "crazy knife," "drinking water," or "prairie people rising up," as has been variously stated; neither is the sign ever properly made on the left side. Such misconceptions have arisen from the careless making of the sign by persons ignorant of its true meaning. The Cheyenne claim that it refers to a former Kiowa custom of painting a stripe across the upper lip and cheeks. This is probably only an attempt to explain the name *Witapätu*, q. v., without any basis in fact, for, had such a custom existed, it would have been indicated by drawing the finger across the face. Moreover, in a series of forty figures painted for the author by Kiowa Indians to illustrate their ancient styles of war paint, not one is thus depicted.

LINGUISTIC AFFINITY

The *Gâ'igwŭ'* or Kiowa, although originating in the far north, have been known for the last sixty years as one of the principal and most

predatory tribes of the southern plains. Their linguistic affinity is still uncertain, the language apparently having no connection with that of any other tribe. This uncertainty, however, is due largely to the paucity of the linguistic material thus far collected from them, and to



Photo by Soule, about 1870

FIG. 43.—Zépkó-cétte or Big-bow

the fact that philologists have made the comparison with the languages of the southern tribes, with whom the Kiowa were found most closely associated, rather than with that of tribes nearer the Canadian border, whence they have drifted to the south. Another thing which serves to

render comparison difficult is the fact that the Kiowa have the custom of dropping from the language any word which suggests the name of a person recently deceased, and substituting for the tabooed word another which will convey the same idea. The old word may be restored after a term of years, but it frequently happens that the new one keeps its place and the original word is entirely forgotten. The change is a new combination of existing roots, or a new use of an existing word, rather than the deliberate invention of a new word, although in some instances words seem to be borrowed for this purpose from existing languages. The same custom exists to a limited degree among the Comanche, who may have adopted it in consequence of their association with the Kiowa, and perhaps among other tribes. With the Kiowa it is carried to such an extent that old men sometimes remember as many as three names which have been used in chronologic succession for the same object. Further linguistic investigation may result in establishing their affinity with the Athapascan, northern Shoshonean, or Salishan tribes.

TRIBAL NAMES

Kiowa, the name by which the tribe is commonly known to the whites, is from the softened Comanche form of the name by which they call themselves, *Gâ'igwũ'* (see the glossary). It is claimed by one or two old men that *Gâ'igwũ'* was not originally their proper name, but a foreign name adopted by the tribe, and untranslatable in their own language. However that may be, it is now, in its root form, *Gâi*, synonymous with Kiowa, whether applied to the individual, language, territory, or utensils of the tribe. It is also the name of one of their recognized tribal divisions. Ancient names used to designate themselves are *Kwú'dă'* and afterward *Tépďă'*, both names signifying "coming out," perhaps in allusion to their mystic origin. These two names are known now only to their oldest men. They sometimes refer to themselves as *Kómpabiăntă*, or people of the "large tipi flaps," although, so far as observation goes, their tipis are not peculiar in this respect. Their name for Indians in general is *Gíăguádaltágâ*, "people of the red flesh." Among other tribes they are called by various names, the best known being the Dakota or Cheyenne form *Witapähätu*, of doubtful translation. The tribal sign, a quick motion of the hand past the right cheek, they explain as referring to a former custom of cutting the hair on that side on a level with the ear.

GENESIS AND MIGRATION

According to Kiowa mythology, which has close parallels among other tribes, their first ancestors emerged from a hollow cottonwood log at the bidding of a supernatural progenitor. They came out one at a

time as he tapped upon the log until it came to the turn of a pregnant woman, who stuck fast in the hole and thus blocked the way for those behind her so that they were unable to follow, which accounts for the small number of the Kiowa tribe. The same being gave them the sun, made the division of day and night, exterminated a number of malevolent monsters, and rendered the most ferocious animals harmless; he also taught them their simple hunting arts and finally left them to take his place among the stars. Other wonderful things were done for them by a supernatural boy hero, whose father was the son of the Sun and whose mother was an earthly woman. This boy afterward transformed himself into two, and finally gave himself to the Kiowa in eucharistic form as a tribal "medicine," which they still retain. Unlike the neighboring Cheyenne and Arapaho, who yet remember that they once lived east of the Missouri and cultivated corn, the Kiowa have no tradition of ever having been an agricultural people or anything but a tribe of hunters.

Leaving the mythic or genesis period, the earliest historic tradition of the Kiowa locates them in or beyond the mountains at the extreme sources of the Yellowstone and the Missouri, in what is now western Montana. They describe it as a region of great cold and deep snows, and say that they had the Flatheads (*Á'daltoñ-ká-igihä'go*, "compressed head people") near them, and that on the other side of the mountains was a large stream flowing westward, evidently an upper branch of the Columbia. These mountains they still call *Gá'i K'op*, "Kiowa mountains." Here, they say, while on a hunting expedition on one occasion, a dispute occurred between two rival chiefs over the possession of the udder of a female antelope, a delicacy particularly prized by Indians. The dispute grew into an angry quarrel, with the result that the chief who failed to secure the coveted portion left the party and withdrew with his band toward the northwest, while the rest of the tribe moved to the southeast, crossed the Yellowstone (*Tsósá P'a*, "pipe (?) stone river"), and continued onward until they met the Crows (*Gaǎ-k'íügo*, "crow people"), with whom they had hitherto been unacquainted. By permission of the Crows they took up their residence east of that tribe, with which they made their first alliance. Up to this time they had no horses, but used only dogs and the travois. For a while they continued to visit the mountains, but finally drifted out into the plains, where they first procured horses and became acquainted with the Arapaho and Cheyenne, and later with the Dakota.

Keim, writing in 1870, says that the Kiowa "claim that their primitive country was in the far north," from which they were driven out by wars, moving by the aid of dogs and dog sledges. "From the north they reached a river, now the south fork of the Platte. Their residence upon this river is within the recollection of the old men of the tribe. Not satisfied with the Platte country, they moved on across the Republican and Smoky Hill rivers until they reached the Arkansas. Thence

they moved upon the headwaters of the Cimarron. Here they permanently located their council fire, and after much fighting secured control of all the country south of Arkansas river and north of the Wichita mountains and headwaters of Red river" (*Keim*, 1).

There can be no doubt as to the correctness of the main points of this tradition, which is corroborated by the testimony of the northern Arapaho and other tribes of that region. While to the ordinary reader the result of the quarrel may seem out of all due proportion to the cause, it will not appear so to anyone familiar with Indian life and thought. The savage is intellectually a child, and from the point of view of civilized man his history is shaped by trivial things, as will be sufficiently apparent from a study of the calendars. It is said that a war between the Delaware and Shawano originated in a dispute between two children concerning a grasshopper. The Crows themselves, according to their own story, separated from their kinsmen the Hidatsa or Minitari on the Missouri for a reason precisely like that of the Kiowa tradition—a quarrel between two chiefs over the proper division of a buffalo (*Matthews*, 1; *Clark*, 2.) A similar story is related to account for the origin of one of the bands of the Dakota. Among wandering hunters disputes in regard to the possession or division of game have always been the most potent causes of separations and tribal wars.

In regard to the dissatisfied band that went to the north, the Kiowa have a fixed belief that their lost kindred, whom they call *Azä'tañhop* ("those who went away dissatisfied on account of the udder"), are still in existence beyond the mountains somewhere to the north or northwest of their old home, where they still speak the old Kiowa language. They assert as positively that they have no relatives in any other quarter, east, west, or south. Several stories are current in the tribe in support of this belief. One woman, now about 80 years of age, when a child was taken by her father with others on a visit to their old friends, the Crows, and says that while there they met a white trader from the north, who addressed them in the Kiowa tongue, which he said he learned from a tribe living farther north, which spoke the Kiowa language. Again, they say that when the Nez Percés (*Á'dalkatóigo*, "people with hair cut round across the forehead"), who had been brought down as prisoners to Indian Territory, visited them in 1883, they told the Kiowa that they knew a people who lived in the "white mountains" west of the old home of the Nez Percés in Idaho, and who spoke a language similar to Kiowa. Whatever weight we may attach to these stories, they at least offer a suggestion concerning the direction in which the linguistic affinity of the Kiowa is to be sought.

Bearing on the subject of the early habitat of the tribe, it may further be stated that, while making a collection among the Kiowa a few years ago, the author obtained from them a small cradle which is essentially different from any now in use among the Kiowa or any

other of the well-known prairie tribes, in that the buckskin covering is attached directly to a solid board back, which is elaborately carved and painted in the style characteristic of the tribes of the Columbia and the northwest coast. On asking the old woman who made it, where she had obtained the idea, she replied that it was the kind the Kiowa used to make a very long time ago. On showing it afterward to Dr Washington Matthews, the distinguished ethnologist and anatomist, he expressed the opinion that such a cradle would produce a flattened skull. It is now in the National Museum at Washington.

EARLY ALLIANCE WITH THE CROWS

The leading facts in the traditional history of the Kiowa are those of their early residence at the extreme head of the Missouri and their subsequent removal to the east and alliance with the Crows. It is impossible to assign any definite date to this early migration from the mountain country, but it was probably about or before 1700. It was subsequent to the separation of the Crows from the Hidatsa, an event which probably took place before the end of the seventeenth century (*Matthews, 2; Clark, 3*), and it must have been long before the discovery of the Black Hills by the Dakota, which, according to a calendar of that people, occurred in 1775 (*Mallery, 2*). The present *tai-me* or sun-dance "medicine" of the Kiowa was obtained from the Crows while the two tribes were neighbors in the north, at a date probably very near 1765. It is probable that scarcity of game or severity of climate had much to do with their original removal from the head of the Missouri, but it is worthy of note that in all their wanderings the Kiowa have never, for any long period, entirely abandoned the mountains. After making friends with the Crows, they established themselves in the Black Hills until driven out by the invading Dakota and Cheyenne, and now for seventy years or more they have had their main headquarters in the Wichita mountains.

The northern Arapaho, now living on a reservation in Wyoming, have distinct recollection of this former northern residence of the Kiowa, with whom in the old times they were on terms of intimate friendship. While visiting them in 1892 they informed the author that when they first knew the Kiowa that tribe lived about the Three forks of the Missouri, near where are now Gallatin and Virginia City, Montana. This information, obtained from old men without the use of leading questions, and with the aid of good maps, tallies exactly with the earliest tradition of the Kiowa tribe. They say further that the Kiowa moved down from the mountains and eastward along the Yellowstone in company with the Crows, and then turned southeastward to about the present neighborhood of Fort Robinson, Nebraska, where they parted with the Crows and continued southward. "Plenty-poles," then nearly ninety years of age, first met the Kiowa when he was a

small boy on the head of the North Platte, west of the present town of Cheyenne, Wyoming.

The friendship between the Kiowa and the Crows was close and intimate, in spite of occasional quarrels, and continued after the Kiowa had entirely removed from the north and established themselves on the Arkansas. They made common cause against the invading Dakota and Cheyenne from the east, by whom they were finally dispossessed. As already stated, the Kiowa obtained their present *tai-me* or sundance medicine from the Crows, and the sacred arrow lance of Tängú-adal's family came originally from the same source. For a long time after removing from the north it was a frequent occurrence for Kiowa fathers to make visits to the Crows and leave with that tribe their young children for two or three years in order that they might learn the Crow language and thus help to preserve the old friendship. There are still several old people among the Kiowa who have a considerable Crow vocabulary acquired in this way. Conversely, the northern Arapaho state that the Crows refer to the Kiowa as their relatives, and that some of them speak a little of the language acquired during similar visits to the south.

THE ASSOCIATED KIOWA APACHE

Incorporated with the Kiowa, and forming a component part of their tribal circle, is a small tribe of Athapascan stock, commonly known as Apache or Kiowa Apache, but calling themselves *Nadiisha Dena*. They are not a detached band of the Apache tribe proper of Arizona, as has commonly been supposed, but came down with the Kiowa from the north, and neither tribe has any tradition of a time when they were not associated. They will be spoken of at length later on. This ancient Athapascan alliance is another link in the chain connecting the Kiowa with the far north.

THE HISTORICAL PERIOD

POSSESSION OF THE BLACK HILLS

We come now to more definite historic ground. Situated east of the Crows, the Kiowa took possession of the Black Hills (*Sádalkáñi K'op*, "stomach-rind, i. e., 'manifold,' mountains"), and having by this time procured some horses, began to make raids on the Spanish frontiers to the south, while they established a friendly trade and intercourse with the Arikara and Mandan on the Missouri. They are mentioned under the name of Cargua (for Caigua) in a Spanish document of 1732, and again as Caigua in 1735. In 1748 the Spanish historian Villaseñor mentions the "Cayguas," in connection with Comanche, Apache, Navaho, and Ute, as among the hostile tribes of New Mexico (see the synonymy). It will be remembered that the greater portion of what is

now Colorado was included with New Mexico under Spanish domination. If, as seems possible, they are identical with the Manrhoat or Manrhout of La Salle, allies of the Gattacka (Kiowa Apache), our knowledge of the tribe would go back to 1682. They continued to occupy the Black Hills until about the close of the last century, when they were driven out by the Dakota advancing from the east, and by the Cheyenne who crossed the Missouri from the northeast. The same pressure drove their old allies, the Crows, farther westward.

The northern Cheyenne informed Grinnell that on first coming into their present country they had found the region between the Yellowstone and Cheyenne rivers, including the Black Hills, in possession of the Kiowa and Comanche (?), whom they drove out and forced to the south. When the author was among the Dakota some years ago, they informed him that they had first known the Kiowa in the Black Hills, and had driven them out from that region. This is admitted by the Kiowa, who continued at war with the Dakota and Cheyenne until about 1840, when a permanent peace was made. It does not appear that the Arapaho had anything to do with this expulsion of the Kiowa, with whom they seem generally to have been on friendly terms, although at a later period we find them at war with the Kiowa, being probably drawn into hostilities through their connection with the Cheyenne. As is well known to ethnologists, the Dakota are comparatively recent immigrants from east of the Missouri. They first reached the Black Hills in 1775, as already stated, so that the final expulsion of the Kiowa must have occurred between that date and 1805, when Lewis and Clark found the Cheyenne in possession of the same region, the Cheyenne being then at war with the Dakota. Curiously enough, there is no note of this war on any of the several Dakota calendars covering this period, described and illustrated by Mallery, although we find a reference to the killing of a Kiowa in the winter of 1814-15.

THE EXTINCT K'ÚATO

The Kiowa have a better memory, and one of their old hero stories relates to the slaughter of an entire band of Kiowa by the Dakota. The ill-fated band was called the *K'úato*, a name signifying "pulling up, or pulling out" from the ground or from a hole, being indicated in the sign language by the motion of "pulling up" with one or both hands. According to the story the Kiowa, apparently nearly the whole tribe together, were attacked by an overwhelming body of the Dakota. Finding resistance hopeless, they fled, but the chief of the *K'úato* urged his people not to run, "because if they did their relatives in the other world would not receive them." Inspired to desperate courage by his words, the *K'úato* faced the enemy and were all killed where they stood, excepting one woman who had fled with the others. According to Te'bodal, who was born about 1817 and is now the oldest man in the tribe, this massacre took place when his grandfather was a young man,

perhaps about 1770. Te'bodal himself remembered having seen the single woman survivor. It is said that the K'úato spoke a peculiar dialect of the Kiowa language, although recognized as a part of the tribe, and were noted for doing foolish and ridiculous things, a statement borne out by the story of their extermination.

INTERCOURSE WITH THE ARIKARA, MANDAN, AND HIDATSA

Next to the Crows, the Kiowa have most to say of their friendship in these old days with the Arikara (Ree), Mandan, and Hidatsa or Minitari on Missouri river. For many years these three confederated tribes, now reduced to about 1,100 souls in all, have occupied jointly a single village on the northeastern bank of Missouri river, in the vicinity of old Fort Berthold, about opposite Knife river, in North Dakota. In 1805 the three tribes, with a small subtribe, now extinct, occupied eight villages, with a total population of nearly 6,000 souls. The Arikara were then considerably farther down the river, while the others were nearly in their present position. From the fact that Grand river, South Dakota, is known to the Dakota as Arikara river it is probable that the Arikara formerly had their residence there for a long period. In habits and home life the three tribes are almost identical, being sedentary agriculturists, living in substantial earth-covered log houses; but in language they are quite distinct. The Arikara or Ree are a branch of the Pawnee and speak a dialect of that language; the Hidatsa, Grosventres, or Minitari were formerly a part of the Crows and speak a dialect of that language; while the language of the Mandan is distinct from either of the others, although remotely cognate with the Hidatsa. They are mentioned prominently by every traveler in that region during the last century, the best description of them being given by Matthews in his work on the Hidatsa.

The definite recollection which the Kiowa have of these tribes shows that they must have been very intimate with them in former times, especially with the Arikara, whom they call *K'át'á*, "biters," designating them in the sign language by a twisting motion of the closed right hand, with thumb extended, in front of the mouth, the allusion being to gnawing corn from a cob. In the north the sign is sometimes made with both hands, the right working against the left, the allusion then being to shelling corn. The Arikara are preeminently distinguished among the northern tribes as the corn-planting Indians, and are usually designated in pictographs by the figure of a man with an ear of corn. It is probable that they taught agriculture to the Mandan and Hidatsa. The Kiowa further identify the *K'at'a* as being called *Paläni* by the Dakota and as speaking a language like that of the Pawnee. Stumbling-bear claims to have met and talked with some of them on a former visit to Washington. They have more to say of the Arikara than of the others, probably because then, as now, they were the largest of the three tribes, and also, as the Kiowa themselves say, because the Arikara

lived nearest, being probably located then, as at a later period, on Ree or Grand river, in South Dakota, which is called by their name in the various Indian languages. They describe the three tribes as living on the Missouri (*Tsosá P'a*) river, in earth-covered grass houses (really log houses, filled in between the logs with grass and covered with earth), and cultivating corn and tobacco, which they traded to the Kiowa. One of the principal divisions of the Kiowa tribe, and the one to which the great Dohásän and several other prominent chiefs belonged, is the K^cat'a or Arikara band, so called, the Kiowa state, on account of their special intimacy with the Arikara in the old times, and not because of Arikara descent. The name of the band must have originated, of course, subsequently to the first acquaintance of the two tribes.

The Mandan they call *Dóhón*, "the last tipi," assigning as a reason for the name that they lived farthest toward the east. The Mandan, unlike the other tribes, did in fact have one of their villages on the farther (eastern) bank of the Missouri. They also sometimes call them *Dowákohón*, an older form of Dohon, and *Sabǎ'*, "stingy," perhaps from some trade dispute. In the sign language the Kiowa designate them by indicating tattoo marks, stating that the women, and sometimes the men, tattooed the arms, breast, and around the lips. This agrees exactly with Clark, who says that the proper sign for Mandan is intended to indicate tattooing on the chin and lower part of the face. He states also, on the authority of an old plainsman, that fifty years ago the Mandan women had a small spot tattooed on the forehead, together with a line on the chin, while of the men the chiefs alone were tattooed, this being done on one side, or one-half of the breast, or on one arm and breast (*Clark, 4*). It may be that the small tattooed circle on the foreheads of many Kiowa women is an imitation from their Mandan sisters. Matthews says that he has seen a few old men of the Hidatsa with parallel bands tattooed on the chest, throat, and arms, but not on any other part of the body, or on any young or middle-age persons in the tribe (*Matthews, 3*).

The Hidatsa or Minitari are known to the Kiowa as *Henónko*, a name which they can not translate. In this word the terminal *ko* is the tribal suffix, while *Henón* is the root, possibly a derivative from *Herantsa*, another form of Hidatsa, the Kiowa having no *r* in their language. To designate them in the sign language, they make a gesture as if dipping up water with the hand, referring to their common name of Minitari, "water crossers," or "water people." This sign is probably now obsolete in the north, as it is not noted by either Clark or Mallery. They say that the Henónko called the Kiowa *Datûmpáta*. The Kiowa describe the three tribes as about the same in regard to house-building methods and the cultivation of corn and Indian tobacco. They have also a distinct recollection of the peculiar "bull boats," tub-shaped and covered with rawhide, used by the Mandan and their allies. They ascribe these boats more particularly to the Mandan, from whom perhaps the Arikara obtained them after moving up to the same neighborhood.

RECOLLECTIONS OF OTHER NORTHERN TRIBES

The old men who have most knowledge of this northern residence and alliance with the Crows and Arikara say, after the Indian style of chronology, that it was in the time when their grandfathers were young men, and when they still had but few horses and commonly used dogs as pack animals in traveling. One of the mythic legends of the tribe accounts for the origin of the Black Hills (*Sádalkañi K'op*, "manifold mountains"), and another deals with the noted Bear Lodge or Devil's Tower (*Tsó-ai*, "tree rock," i. e., monument rock), near Sun Dance, Wyoming, which they claim is within their old country. Beyond the Yellowstone (*Tsósâ P'a*) they say lived the Blackfeet (*Tón-kónko*, "blackleg people") and the Arapaho Gros Ventres (*Bot-k'iägo*, "belly people"). They knew also the Shoshoni (*Sondóta*, "grass houses"), who, they say, formerly lived in houses of interwoven rushes or grass; the Flatheads, the northern Arapaho, and of course the Dakota. It is somewhat remarkable that they knew also the small tribe of Sarsi, living on the Canadian side of the line at the source of the North Saskatchewan, whom they describe accurately as a tribe living with the Blackfeet and speaking a language resembling that of the Apache. They call them *Pák'iägo*, which they render "stupid people," indicating the tribe in the sign language by a sweeping motion of the right hand across the thigh, perhaps from a confusion with *paki*, thigh. It is possible that the name is not really of Kiowa origin, but is derived from *Päki* or *Päkiani*, the Shoshoni name for the Blackfeet themselves. The Kiowa call the Brulé Dakota *Pakí-gudälkantä*, "red-burnt thigh" people, with the same gesture sign as for the Sarsi. Several prominent men of the Kiowa tribe, among whom may be mentioned Gaápiatañ and Pátádal, are of Sarsi descent. The maternal grandmother of the noted chief Setäñgya, killed at Fort Sill in 1871, was a Sarsi woman who married a Kiowa man during an interchange of friendly visits between the two tribes. By reason of this Athapascan blood, those of Sarsi descent, including Gaápiatañ, who is Setäñgya's nephew, consider themselves in a measure related to the Kiowa Apache.

From the beginning the Kiowa say that they were usually on friendly terms with the Crows, Arapaho, Arikara, Mandan, and Hidatsa, and, so far as they can recollect, with the Shoshoni and Flatheads, the friendship being interrupted, however, by occasional quarrels more or less serious. They were frequently at war with the Cheyenne, and always, from their first acquaintance, with the Dakota, Pawnee, and Ute. Their relations with the southern tribes will be noted hereafter.

ACQUIREMENT OF HORSES

Although the Kiowa had no horses until they came down from the mountains and settled near the Crows, it is probable that they obtained some very soon afterward, probably from their friends the Crows.

La Salle, in 1682, states that the Gattacka (Kiowa Apache) and Manrhoat (Kiowa?) had then plenty of horses, which he says they had probably stolen from New Mexico (*Margry, 1*).

The notice in Villaseñor would indicate that they were able to mount some of their warriors as early as 1748, as it is hardly probable that they would have been able to attract attention by their inroads so far south as the Spanish settlements if their warriors had been obliged to travel entirely on foot. With some tribes, however, notably the Pawnee, it was a frequent practice for the warriors to go out on foot, returning, if successful, mounted on the horses taken from their enemies. Horses must also have been taken by the Kiowa from the Comanche, who lived south of them in the territory adjoining the Spanish possessions, and with whom the Kiowa were then at war. In the beginning of the present century we find the Kiowa mentioned as possessing large herds of horses, which they traded with the Arikara and Mandan for European goods.

Horace Jones, interpreter at Fort Sill, states that at a council held at Fort Cobb in 1868, Ten-bears, an old Comanche chief, scored the Kiowa for their constant raids into Mexico and Texas in spite of their promises to the government to cease such practices, saying to the assembled Kiowa, "When we first knew you, you had nothing but dogs and sleds. Now you have plenty of horses, and where did you get them if they were not stolen from Mexico?" This must be interpreted, however, from a point of comparison of the Comanche, who have long been noted for the number of their ponies. It was certainly a case of the pot calling the kettle black, as the principal business of both tribes for generations, until confined to a reservation, was that of raiding their southern neighbors in order to obtain horses and captives. It is unnecessary to dilate on the revolution made in the life of the Indian by the possession of the horse. Without it he was a half-starved skulker in the timber, creeping up on foot toward the unwary deer or building a brush corral with infinite labor to surround a herd of antelope, and seldom venturing more than a few days' journey from home. With the horse he was transformed into the daring buffalo hunter, able to procure in a single day enough food to supply his family for a year, leaving him free then to sweep the plains with his war parties along a range of a thousand miles.

INTERCOURSE AND WAR WITH THE COMANCHE

While the Kiowa still occupied the Black Hills their nearest neighbors toward the south were the Comanche, whose language and traditions show them to be a comparatively recent offshoot from the Shoshoni of Wyoming, and whose war parties formerly ranged from Platte river to central Mexico. In 1724 Bourgmont describes them, under the name of Padouca, as located between the headwaters of Platte and Kansas rivers. Like the other prairie tribes, they drifted steadily southward,

and about the middle of last century were established chiefly about the upper Arkansas and its principal tributaries. Long before this time, however, the *Pénütēka* division had separated from the main body and gone down into Texas. Pádouca, the name used by Bourgmont, is one form of the name by which the Comanche are known to the Osage, Dakota, and related tribes, and is probably derived from *Pénütēka*.

As the Kiowa pressed southward before the advancing Dakota and Cheyenne, they encountered the Comanche, resulting in a warfare continuing many years, in the course of which the Comanche were gradually driven south of the Arkansas. The war was finally terminated and a lasting peace and alliance effected between the two tribes through the good offices of the Spaniards of New Mexico.

PEACE WITH THE COMANCHE

Now the Kiowa tradition becomes clear and detailed. According to the story which the old men had from their fathers, who were contemporary with the events, the Kiowa advanced along the base of the mountains and pushed the Comanche from the northern head streams of the Arkansas. When both sides were about worn out with fighting, it happened that a small party of Kiowa on a friendly visit to a Spanish settlement southwestward from that river—perhaps Las Vegas or possibly Santa Fé—stopped to rest at a house, which they particularly state was not a fort or trading post. The house was a large one with several rooms, and by a curious coincidence a party of Comanche had arrived shortly before and were then talking in the next room, all unaware of the near presence of their enemies. Hearing the voices and recognizing the language, the Kiowa at once prepared for battle, and another bloody encounter was about to be added to the long list, when their Mexican host, friendly to both sides, interposed and represented to the Kiowa that now was their opportunity to establish a lasting peace with their foes, offering his own services as mediator. After some debate the Kiowa accepted his proposition, and the kindly Mexican, going into the next room, informed the astonished Comanche that a party of their hated enemies was outside waiting to talk of peace. Being assured that no treachery was intended, they came out and the leaders of the two parties saluted each other. The Kiowa leader, whose name was Guik'áte, "Wolf-lying-down," and who was next in authority to the principal chief of the tribe, assuming to speak for his people, then expressed their desire for peace. To this the Comanche leader, Päreiyä, "Afraid-of-water" (*Toñpeto* in the Kiowa language), replied that as this was a matter of grave importance, it would have to be considered by the whole tribe, and invited the Kiowa to go back with them to the Comanche country in order that the business might there be fully discussed. The Kiowa hesitated, not yet being quite willing to trust themselves in the lion's den, when Guik'áte, anxious to spare further bloodshed, said, "I am a chief. I am not afraid to die.

I will go." A Comanche captive among the Kiowa volunteered to go with him. Turning then to his followers, he said to them, "Go home and tell our tribe that I am gone to make peace with the Comanche. Return for me to this place when the leaves are yellow. If you do not find me here, know that I am dead and avenge my death." He then dismissed them, and the Kiowa started homeward, while he, with the captive and one or two Mexicans accompanied the Comanche to their camps on *Gañta P'a*, the Double-mountain fork of the Brazos, in Texas.

On arriving there with his escort, the Comanche were at first disposed to regard him as an enemy and made a show of preparing to revenge upon him the losses they had suffered at the hands of his people, but finding that he was a brave man not to be easily frightened, they changed their purpose and gave him a friendly welcome. He remained with them all summer, being well entertained by them on the hunt and at their social gatherings, and when at last the leaves began to turn, the tipis were taken down and the whole band, having long ago decided on peace, moved off to meet the Kiowa at the appointed rendezvous. They had not long to wait, for Indians observe the season changes closely, before the whole warrior body of the Kiowa tribe appeared in sight, prepared either to make a treaty of perpetual friendship or to avenge the death of their chief, as the case might be. As they approached, the Comanche chief and Guik áte rode out to meet them, somewhat to the surprise of the Kiowa, who had hardly hoped ever again to see their kinsman alive. He told the story of his kind treatment at the hands of the Comanche and their earnest desire for peace, and the result was a treaty of friendship and alliance which endures to this day, the two tribes, with the Kiowa-Apache, having ever since occupied a common territory and acted together on all important occasions, notwithstanding radical differences in language, ceremonies, and temperament. The former condition of hostility is clearly shown by the fact that the common name of the Kiowa for their present allies, the Comanche, is *Gyái'ko*, "Enemies."

This treaty with the Comanche must have been made toward the close of the last century, probably about 1790. As there is no tally date in Kiowa history until we come to "the year when the stars fell," i. e., 1833, a description of the manner in which we arrive at this conclusion may be of interest as a specimen of the ordinary methods of Indian chronology.

Among the oldest men of the tribe are T'ébodal, "One who carries a buffalo's lower leg," Gaápiatañ, "Feathered lance," (commonly known as Heidsick, from his Comanche name of Haí-tsiki), and Â'dalpepte, "Bushy-hair" (Frizzle-head), all being prominent men and noted warriors when in their prime. T'ébodal is the oldest man in the tribe, and as he was "a well grown boy" when the stars fell," is consequently now just about 80 years of age, as the Indians consider a boy a young warrior at 17 or 18. Gaápiatañ is a few years younger, and Â'dalpepte

was "old enough to ride a horse when the stars fell," so that we may assume him to be now (1896) about 70 years of age. It will be noted that, contrary to general opinion, Indians are not remarkably long-lived.

Gaápiatañ's estimate seems to place the event farthest back in point of time. He fixes it by "a very old woman," who died eleven winters ago (1885), and whose father had told her that the treaty with the Comanche was made thirty-three years before she was born. Âdalpepte states that it was made "when his father was a young man." T'ébodal says that it was before he was born, but that his father knew both leaders who negotiated the peace, and that he himself knew the Comanche leader, Päreiyä, as a very old man, who was afterward killed by the Cheyenne at a time when T'ébodal was grown to manhood and had already been to war. According to the Kiowa calendar, the allied tribes made peace with the Cheyenne about 1840, so that the chief who negotiated the treaty for the Comanche must have been killed shortly before that time, the Kiowa leader, Guik'áte, being already dead. Balancing all the statements, we get 1790 as the most probable approximate date. The principal chief of the tribe at the time of the treaty was Políakyä, "Hare-lip," alias Kágiätsé, "Thick-blanket." He was succeeded by Tsóñbohón, "Feather-cap," who was succeeded by A'dáte, "Island-man," who was deposed in 1833 in favor of Dohásän, who thenceforth ruled the tribe until his death in 1866.

CONFEDERATION OF THE TWO TRIBES

The peace thus made between the two tribes has never been broken, in which fact there may be a sermon for those who regard the Indian as faithless, when we consider how few European alliances have endured as long. The Pénätëka Comanche, who lived far down in Texas, were not included in this compact and had very little connection even with the northern bands of their own people until brought together under the reservation system. Immediately after the treaty the Kiowa began to move down and make their camps along and south of the Arkansas, which, until that time, had been considered the northern boundary of the Comanche country and the southern limit of the Kiowa range. In the territory which they thenceforth held in common the Kiowa usually made their home camps more to the northwest, about the Arkansas, while the Comanche kept near to the Staked plains and the Texas frontier. Strengthened by their alliance for war and defense, the confederated tribes were now able to make a successful stand behind the Arkansas against further invasion from the north. The raids of the Kiowa on the Mexican settlements, hitherto desultory and ineffective, now became constant and destructive and continued until both tribes were finally subjugated and confined to their reservation after the outbreak of 1874. In these raiding expeditions they frequently made headquarters in the Sierra Madre, whence they descended upon

the lower country on each side. Old men are still living in the tribe who have raided as far south as the city of Durango (which they know by this name) and southwest through Sonora and Sinaloa to the Gulf of California. These war parties would sometimes be absent two years. To the west they reached the great Colorado river and tell of killing some Havasupai in their canyon home. In the east they made captives on Matagorda bay, Texas.

NEUTRAL ATTITUDE OF NEW MEXICANS

According to the Kiowa and Comanche, whose statements are confirmed by abundant testimony from other sources, the inhabitants of New Mexico, from mercenary motives, usually held themselves neutral in this war on their brethren to the south. New Mexican *Comancheros* and domesticated Pueblo Indians carried on a lucrative trade among these tribes at the same time that Kiowa or Comanche war parties were ravaging the southern provinces or selling horses and mules, taken in these raids, to the inhabitants of Las Vegas and neighboring towns. The lances and tomahawks used by their warriors were of Mexican manufacture, more slender and graceful in design than those supplied to the northern tribes by English and American traders. It was only by such tacit connivance or active aid from the people of New Mexico that these tribes were able to carry on an unceasing warfare of extermination as far south as Tamaulipas and Durango in Mexico.

RELATIONS WITH OTHER SOUTHERN TRIBES

Subsequent to the treaty with the Comanche, and as a consequence of it, the Kiowa made peace with the Mescalero Apache (*Ė'sikwita*), with whom they had formerly been at enmity, having driven them from the Staked plains into the mountains west of the Pecos. The friendship, however, was somewhat precarious. They were also on friendly terms with the Wichita and their associated tribes, the Waco, Tawákoni, and Kichai. With the Caddo and the cannibal Tonkawa to the east, and with the Navaho and Ute and presumably also the Jicarilla Apache on the west, they were always at war. They usually carried on a friendly trade with the neighboring Pueblos. Their relations with the Apache of Arizona were too casual to be of a definite nature. They were at war with the Osage until 1834. To all these tribes the confederated Kiowa, Comanche, and Apache held but one and the same relation after the alliance of about 1790.

FIRST OFFICIAL AMERICAN NOTICES, 1805-1807

The earliest official account of the Kiowa is given by the explorers Lewis and Clark, who ascended the Missouri in 1804 and wintered among the Mandan, before proceeding onward across the mountains and down to the mouth of the Columbia. They do not appear to have

met any of the Kiowa, but heard of them from the tribes living on the river. By that time the Kiowa, whom the explorers erroneously supposed were distinct from the "Wetepahatoes," had been driven out of the Black Hills, which were then in possession of the Cheyenne, while the Dakota held the country to the eastward. The Kiowa were then on the Padouca or North Platte. This agrees with the statements of old men of the Dakota confederacy, who informed the writer that within their early recollection that tribe had lived between the North Platte and the Niobrara, having been expelled from the Black Hills by the Dakota of the preceding generation.

The official report of Captain Lewis describes the Kiowa ("Kiawas" and "Wetepahatoes") as living in 1805 on the North fork of the Platte, and numbering 70 tipis, 200 warriors, and 700 souls, while the Kiowa Apache ("Cataka") lived somewhat farther north, on the headwaters of the two forks of Cheyenne river, and are estimated at 25 tipis, 75 warriors, and 300 souls. While the figures thus given for the Apache are probably nearly correct, those for the Kiowa are much too low, unless we assume that they had been so greatly reduced by the war with the Dakota. The alliances and wars of the two tribes, Kiowa and Apache, were the same, they carrying on a defensive war with the Dakota and being at peace with all the other tribes of the region, particularly with the Arikara, Mandan, and Hidatsa. The account continues:

They are a wandering nation, inhabit an open country, and raise a great number of horses, which they barter to the Ricaras, Mandans, etc, for articles of European manufactory. They are a well-disposed people, and might be readily induced to visit the trading establishments on the Missouri. From the animals their country produces, their trade would no doubt become valuable. These people again barter a considerable proportion of the articles they obtain from the Menetares, Ahwah-haways, Mandans, and Ricaras to the Dotames and Castapanas. . . . Neither these people ("Kiawas"), the Wetepahatoes, nor the Chyennes have any idea of exclusive right to the soil (*Lewis and Clark, 1*).

The Dotames and Castapanas (for Castahanas) here mentioned are described as living back of the Kiowa, between the head streams of the North Platte and the Yellowstone, and were probably bands of the Shoshoni. From this it appears that besides being well supplied with horses, with which they carried on a profitable trade at this period with the tribes on the Missouri, the Kiowa also acted as the trading medium between these tribes and others living in the mountains beyond the Kiowa. The officer suggests the mouth of Cheyenne river as the most suitable place to establish a trading post for them. The Crows are described as having then the same wars and friendships as the Kiowa, excepting that they were at war with the Arikara as well as with the Dakota (*Lewis and Clark, 2*).

The Comanche are described at this period (1805) under the name of the "La Playes" division of "Aliatans" or "Snake Indians," as inhabiting the plains from the headwaters of the Arkansas, and including

the sources of Red river, and extending from the mountains eastward indefinitely. They were a wandering people, claiming no particular boundaries, and, although possessing no guns, were brave and warlike. Their country abounded in wild horses, besides great numbers which they raised themselves (*Lewis and Clark*, 3).

In his volume published a few years later the explorer, Zebulon M. Pike, states that the Kiowa, estimated by him to number 1,000 men, had in 1803 been driven by the Dakota into the mountains on the heads of the Platte and Arkansas and north of the Comanche, where they were then wandering. They owned immense herds of horses, were armed with bows, arrows, and lances, hunted the buffalo, and were at war with the Dakota, Pawnee, and "Tetau" (here meaning the Ute). In another place he mentions both Ute and Kiowa as living in the mountains of northern Mexico—the present Colorado and New Mexico—the former being more civilized from contact with the Spaniards. He speaks also of meeting, in 1807, a party of Kiowa and Comanche returning from a trading expedition to the Mandan (*Pike*, 1).

EXPLANATION OF "ALIATAN" AND "TETAU"

As the names Aliatan and Tetau here quoted from Lewis and Clark, with their variants, have been the cause of much confusion in our western tribal nomenclature, some explanation will not be out of place. Although so unlike in appearance, these appellations are really but different forms of the same word. The Ute of the mountain region at the headwaters of the Platte and the Arkansas, being a powerful and aggressive tribe, were well known to all the Indians of the plains, who usually called them by some form of their proper name, *Yúta-wáts*, or, in its root form, *Yuta*, whence we get Eutaw, Utah, and Ute. Among the Kiowa the name becomes *Ítă(-go)*, while the Siouan tribes seem to have nasalized it so that the early French traders wrote it as Ayutan, Iatan, or Ietan. By prefixing the French article it became L'Iatan, and afterward Aliatan, while by misreading of the manuscript word we get Jatan, Jetan, and finally Tetau. Moreover, as the early traders and explorers knew but little of the mountain tribes, they frequently confounded those of the same generic stock, so that almost any of these forms may mean Shoshoni, Ute, or Comanche, according to the general context of the description.

UNSUCCESSFUL OVERTURES OF THE DAKOTA

As an incident of the war in progress during this period between the Kiowa and the Dakota, we find it recorded on a calendar of the latter tribe, under date of 1814-15, that a party of their people visited the Kiowa camp on Horse creek for the purpose of making peace, but their benevolent purpose was defeated by the occurrence of a sudden quarrel between one of their own men and a Kiowa, which ended by the Dakota sinking his tomahawk into the Kiowa's head, thus bringing the peace

negotiations to an abrupt close (*Mallery, 3*). The story, which well illustrates the uncertainty of Indian temper, has a striking parallel in Grinnell's story of "The Peace with the Snakes" (*Grinnell, Blackfoot, 1*). The Kiowa camp was at the junction of Kiowa creek with Horse creek, which enters the North Platte from the south in Nebraska, just east of the Wyoming line.

SMALLPOX EPIDEMIC OF 1816

In 1816 the smallpox made terrible ravages among all the tribes in the region of the Red and Rio Grande, being probably communicated from the Spanish settlements. The Comanche especially lost heavily (*Morse, 1*). The Kiowa suffered in proportion, and their old men speak of this as the first epidemic of smallpox within the memory of their tribe. It is probable, however, that they had suffered in the same way some years before, for we know that in 1801 a Pawnee war party, returning from New Mexico, brought the smallpox home with them, with the result that it spread among the tribes from the Missouri to the coast of Texas. The prairie tribes are said to have lost more than half their population at this time, while the Wichita, Caddo, and others in the south suffered almost as severely (*Morse, 2; Lewis and Clark, 4*).

THE KIOWA IN 1820

In the account of his expedition up the Arkansas in 1820, Long speaks of the Kiowa as wandering with the Arapaho and others over the prairies of Arkansas and Red rivers, and having great numbers of horses, which they traded to the Cheyenne and other northern Indians, who were not able to rear them so easily in their colder and more barren country. He describes a great gathering of tribes in 1815 on the South Platte, apparently about the junction of Kiowa creek in Colorado, a region which he mentions as frequented by the Kiowa, when the Cheyenne came down with goods from the traders on the Missouri to meet and trade for horses with the Kiowa, Arapaho, and "Kaskaia or Bad Hearts," and a party of traders from St Louis (*James, Long's Ex., 1*). This appears to be the first notice of the Kiowa as living on Red river—which, however, may here mean the Canadian—and is evidence that they were at this time on friendly terms with the Arapaho and Cheyenne, with both of which tribes they were soon after at war. We learn also from this notice that the St Louis traders had already begun to come out to trade with them on the Arkansas, although none were regularly established in their territory until some years later. The "Kaskaias" are probably the Kiowa Apache, or possibly the Wichita.

THE OSAGE MASSACRE AND THE DRAGOON EXPEDITION—1833-34

We come now to the period covered by the Kiowa calendars, the first important event of which is the massacre of a large number of the tribe by a war party of Osage in the early spring of 1833. This led

indirectly to the expedition of the First dragoons in 1834, by which the Kiowa, Comanche, Wichita, and associated tribes were first brought into official relations with the United States. The massacre and the expedition will be found treated at length in the proper place. When the troops returned to Fort Gibson, in the eastern part of Indian Territory, in August, they were accompanied by a party of one Waco, one Comanche, three Wichita, and fifteen Kiowa chiefs or headmen, of whom the artist Catlin says they were undoubtedly one of the most interesting groups that had ever visited the frontier. Invitations were sent out to the chiefs of all the neighboring tribes to come in to Fort Gibson and meet their visitors from the west. A number responded, and a council lasting several days was held under the auspices of Colonel Dodge of the Dragoons, Indian Agent Major Armstrong, and Indian Commissioner General Stokes, which paved the way for a friendly understanding between the eastern and western tribes, and for both with regard to the United States (*Catlin, 1*).

A year later, in August, 1835, as a result of the friendly relations thus established, the chiefs of the Comanche and Wichita met the United States commissioners at Camp Holmes, about 5 miles northeast of the present site of Purcell, Indian Territory, and made their first treaty with the government. The principal stipulation was that there should be peace and friendship between the Comanche and Wichita on the one hand, and the United States, Creek, Cherokee, and other immigrant tribes, and the Osage on the other (*Treaties*).

THE TREATY OF 1837

Owing to a delay in the negotiations, the Kiowa who had attended the meeting became impatient and returned home and consequently were not parties to this treaty, but two years later a full delegation of Kiowa, Apache, and Tawakoni went down to Fort Gibson, where the first treaty between the United States and these tribes was made on May 26, 1837, and was formally ratified the following year. In the document the three tribes are called "the Kioway, Ka-ta-ka, and Ta-wa-karo nations of Indians." The general terms of the treaty are the same as in that previously made with the Comanche and Wichita, namely, peace and friendship, with forgiveness of past injuries, and satisfactory settlement of future disputes that might arise between these western tribes and the Osage, Muscogee (Creek), and citizens of the United States. All the tribes concerned were to have equal hunting rights on the southern prairies as far west as the jurisdiction of the government extended, and citizens of the United States were to have free right of travel to and from Mexico and Texas through the Indian hunting grounds.

There was also a stipulation that if "any of the red people belonging to the nations or tribes of Indians residing south of the Missouri river and west of the states of Missouri and Arkansas, not parties to this

treaty." should be found in the country of the Kiowa, they should be kindly treated by them. This was probably intended to refer only to the immigrant tribes removed from the east, as it was hardly to be expected that the Kiowa would act very hospitably toward any stray Dakota or Pawnee who might occasionally visit the Arkansas in search of Kiowa scalps or ponies. There was also a distinct understanding that it was the desire of the government that perfect peace should exist between the Kiowa and their allies and the republics of Mexico and Texas. The usual presents were then distributed and everybody was happy (*Treaties*).

The peace thus made with the Osage and Creeks was never broken, although in after years relations with the Osage were somewhat strained in consequence of their serving as scouts against the allied southern plains tribes. The promised friendship was also kept with regard to the citizens of the United States until after the annexation of Texas, which the Kiowa and Comanche never ceased to regard as a distinct and hostile government, making a clear distinction between "Americans," i. e., settlers and emigrants from the north or Kansas side, and "Texans," whom they regarded as a different nation and their enemies, in having driven them from their best hunting grounds in violation of treaties and without compensation.

The treaty commissioners on behalf of the government were General Montfort Stokes and A. P. Chouteau, the latter being a member of the noted pioneer trading company. Clermont and Roly McIntosh, head chiefs of the Osage and Creeks, signed, with others, for their respective tribes. Among the witnesses were a number of officers stationed at Fort Gibson, including, among others, the commanding officer, Colonel Whistler, the noted Captain Bonneville, and Colonel R. L. Dodge, who had led the dragoon expedition. The treaty was signed by ten Kiowa chiefs and principal men, three Apache (whose Kiowa names only are given), and four Tawakoni. Below are given the names of the Kiowa and Apache, as the earliest on record from these tribes, excepting those given by Catlin, together with the proper forms and translations of those which can be identified.

Kiowa

- Ta-ka-ta-couche, "Black Bird" (*Couche-kóñgya*, "black" ?).
- Cha-hon-de-ton, "Flying Squirrel."
- Ta-ne-congais, "Sea Gull" (?) (*T'ené-kóñgyă*, "Black Bird").
- Bon-congais, "Black Cap" (*Bohón-kóñgya*, "Black Cap").
- To-ho-sa, "Top of the Mountain" (*Dohá-sän*, "Little Bluff").
- Sen-son-da-cat, "White Bird."
- Con-a-hen-ka, "Horned Frog" (*Séhänk'ia*, "Horned Toad Man" ?).
- He-pan-ni-gais, "Night."
- Ka-him-hi, "Prairie Dog" (*Tséñhi* ? "Dog").
- Pa-con-ta, "My Young Brother."

Apache

- Hen-ton-te, "Iron Shoe" (*Háñ-doti*, "Iron Shoe, or Moccasin").
- A-ei-kenda, "One who is Surrendered."
- Cet-ma-ni-ta, "Walking Bear" (*Set-mänte*, "Bear Above ? or Walking Bear" ?).

At this time the Kiowa were located on the upper waters of Arkansas, Canadian, and Red rivers, in friendship with the Comanche and Wichita, who occupied much of the same territory, but usually ranged more to the east and south. They continued to occupy the same general region until confined to their present reservation. Their war parties extended their raids far beyond these limits, particularly toward the south.

CATLIN'S OBSERVATIONS IN 1834

Catlin, who saw them in 1834, describes them as a much finer race of men than either the Comanche or Wichita, being tall and erect, with an easy graceful gait, long hair reaching often nearly to the ground, with a fine Roman outline of head, of a type common among the northern tribes, but entirely distinct from that usually found in the south (*Catlin*, 2).

TRADERS AMONG THE KIOWA

From the statement of Lewis and Clark already noted, it appears that in 1805, while still located on the North Platte, the Kiowa had as yet no communication with traders, but obtained supplies indirectly through the tribes living farther east. From Pike's narrative, however, we learn that James Pursley, "the first American who ever penetrated the immense wilds of Louisiana," spent a trading season with the Kiowa and Comanche in 1802 or 1803, under engagement with a French trader operating from the Mandan country, and remained with them until the next spring, when the Dakota drove them from the plains into the mountains at the heads of the Platte and Arkansas (*Pike*, 2). From Long's statement, also previously quoted, we learn that in 1815, the Kiowa having drifted farther south in the meantime, traders from St Louis had begun to ascend Arkansas river to trade with the Kiowa, Cheyenne, and other tribes near its headwaters. From other sources it is apparent that before this time they had had dealings also with the Spaniards of New Mexico. The first regular American trading expedition to the Kiowa country was made in 1834 when, on the return of the visiting chiefs from Fort Gibson, a company of eighty trappers and traders went back with them to their homes on the upper Washita and Red rivers (*Catlin*, 3). In 1835, shortly after the treaty with the Comanche at Camp Holmes, Colonel Auguste Chouteau built on the same site a small stockade fort, where a considerable trade was carried on with the Comanche, Kiowa, Wichita, and associated tribes until his death three years later, when the place was abandoned (*Gregg*, 1). The exact location of Camp Holmes and Chouteau's fort was at a spring on a small creek, both still bearing the name of Chouteau, on the east or north side of South (main) Canadian river, about 5 miles northeast of where now is the town of Purcell, Indian Territory. It was a favorite Indian camping ground and was the site of a Kichai village about 1850.

Auguste Chouteau, the descendant of one of the early French founders of St Louis, was the pioneer organizer of the Indian trade

in the upper Red river country, as were the Bents, also of French origin, on the upper Arkansas. Under the name of *Soto*, Chouteau is still held in affectionate remembrance by the Kiowa.

Chouteau's fort on the Canadian was considered to be in Comanche territory. Shortly after the treaty with the Kiowa in 1837, he established what they regard as the first trading post within their own country, on the west bank of Cache creek, about 3 miles below the present Fort Sill, Oklahoma. *Tomé-te* (Thomas?) is the name by which the Kiowa remember the trader in charge, who, however, did not remain long. Another store was established nearly on the same ground by William Madison (*Sénpo-zédalbe*, "Terrible-beard") in 1869, after the tribes had been assigned to a reservation. In 1844, William Bent began building trading posts on the South Canadian, in the Texas panhandle, near the principal Kiowa trails. They also traded extensively at various points on the Arkansas until their final removal to Indian Territory.

FIRST VISIT TO FORT GIBSON

With the treaty of 1837 and the building of the first trading post in their country, the modern history of the Kiowa may be said to have fairly begun. Their first introduction to American civilization was in 1834, when Dohásän and the other chiefs accompanied the troops back to Fort Gibson, and again in 1837 when they went to the same place for the purpose of making the treaty. Soon afterward arrangements were made by Colonel Chouteau to have a delegation of Kiowa, Comanche, and their associated tribes visit Washington and other eastern cities. A party of chiefs visited Fort Gibson for this purpose in the summer of 1839, but Colonel Chouteau having died during the previous winter, and the season being then far advanced, it was deemed best to abandon the trip, and accordingly they were given some presents and returned to their homes (*Report*, 1).

SMALLPOX EPIDEMIC OF 1839-40—PEACE WITH THE CHEYENNE AND ARAPAHO

In the winter of 1839-40 the Kiowa again suffered from the smallpox, which had broken out in the north in the summer of 1837, nearly exterminating the Mandan, and then swept the whole plains to the gulf. In 1840 they made peace with the Arapaho and Cheyenne, with whom they have ever since been on terms of intimate friendship (see the calendar). They had already made peace with the Dakota, so that they were now on good terms with all the tribes of the plains excepting the Pawnee and Tonkawa, who seem always to have been outlawed tribes, without friends or allies.

TEXAN SANTA FÉ EXPEDITION

In 1841 the Texan Santa Fé expedition passed through the country of the Kiowa. Kendall, the historian of that ill-fated undertaking, describes the tribe as occupying the prairies near the headwaters of Colorado,

Brazos, Wichita, and Red rivers, and incorrectly supposes that their hunting grounds had never before been visited by white men. He says that they seemed to be a powerful people, hitherto but little known, owing to the fact that their range was south of the line of the Missouri traders and north of that portion of the Comanche country with which the Texans were acquainted. He speaks of their extraordinary horsemanship, and credits them with the feat, ascribed also to other plains tribes, of throwing themselves to one side of their horses while riding parallel with their enemies in such a way as to conceal and protect their bodies while discharging their arrows directly under their horses' necks. They had then but few guns, and these were ineffective in their hands, but were surprisingly expert in the use of shields, bows, and lances (*Kendall*, 1). The disastrous encounter of the Texans with the tribe is narrated in the proper place.

CHOLERA EPIDEMIC OF 1849

The next notable event in Kiowa history is the cholera epidemic of 1849. It was brought from the east by California emigrants, and ravaged all the tribes of the plains. The Kiowa remember it as the most terrible experience in their history, far exceeding in fatality the smallpox of nine years before. Hundreds died and many committed suicide in their despair (see the calendar).

FORT ATKINSON TREATY IN 1853

For years the Kiowa and their confederates had been carrying on a chronic warfare against Mexico and Texas, although generally friendly toward Americans on the north. For the protection of the advancing settlements and the traffic over the Santa Fé trail, now amounting to over \$2,000,000 annually (*Report*, 2), it was deemed necessary to end this anomalous condition of affairs. Accordingly, on July 27, 1853, a treaty was negotiated by agent Thomas Fitzpatrick, at Fort Atkinson, on the Arkansas, in Kansas, with the Kiowa, Comanche, and Apache, by which these tribes agreed to remain at peace with both the United States and Mexico, and conceded the right of the government to establish roads and military posts within their territory. In return for these concessions, they were to receive an annuity of \$18,000 for a term of ten years, subject to a further extension of five years (*Treaties*). It is somewhat remarkable that this treaty is not noted on the calendar, neither does it seem to form a subject of conversation among the older men.

DEPREDACTIONS IN MEXICO—MEXICAN CAPTIVES

Although for obvious reasons the Indians were opposed to the establishment of roads and military posts in their country, the chief difficulty in the way of a treaty was their unwillingness to cease war on Mexico. The proposition to restore their Mexican captives met a

prompt and decided refusal. As the Mexican captive element forms so large a proportion of the blood of these three tribes, the remarks of agent Fitzpatrick in this connection are of interest:

The chief difficulty which occurred in negotiating the present treaty was not, however, presented in the article embracing the foregoing points, but in that which contemplates a cessation of hostilities against the neighboring provinces of Mexico and the restoration of prisoners hereafter captured. For a long time these tribes have been in the habit of replenishing their caballadas of horses from the rich valleys and pasture lands which border upon the Rio Grande. Yearly incursions have been made by them far into the interior of Chihuahua and Durango, and they but seldom return without having acquired much plunder, as well as many captives, from the defenseless inhabitants of that country. The name of the Comanche and Apache has become a byword of terror even in the villages and beneath the city walls of those fertile provinces. The consequences of those expeditions are twofold, for while they serve to sharpen the appetite for pillage and rapine, they also tend to keep up the numbers of the tribe. The large herds driven off produce the former result, and the prisoners captured contribute to the latter. The males thus taken are most commonly adopted into the tribe, and soon become the most expert leaders of war parties and the most accomplished of marauders. The females are chosen as wives and share the duties and pleasures of the lodge. In fact, so intermingled amongst these tribes have the most of the Mexican captives become that it is somewhat difficult to distinguish them. They sit in council with them, hunt with them, go to war with them, and partake of their perils and profits, and but few have any desire to leave them. Upon this account the chiefs of the nations refused positively and distinctly to entertain any proposals or make any treaties having in view giving up those captives now dwelling amongst them. They stated very briefly that they had become a part of the tribe; that they were identified with them in all their modes of life; that they were the husbands of their daughters and the mothers of their children, and they would never consent to a separation, nor could any persuasion or inducement move them to abate this position. All that could be accomplished was to make a provision for the future (*Report*, 3).

Even this much seems to have amounted to but little, for in the next year we find the same agent reporting that "so far as I can learn, they have faithfully complied with the treaty stipulations, save one. It is a difficult matter to make them understand that New Mexico now belongs to the United States. They deny ever having consented not to war on Mexicans. They say that they have no other place to get their horses and mules from" (*Report*, 4).

DEFEAT OF ALLIED TRIBES BY SAUK AND FOX, 1854

In the summer of 1854 the Kiowa, Comanche, Apache, Cheyenne, and others of the plains tribes, organized a great expedition for the purpose of exterminating the immigrant tribes in eastern Kansas, whose presence was beginning to be felt in an ominous decrease of the buffalo. Although this was perhaps the largest war party ever raised by the plains Indians south of the Sioux country, being estimated to number 1,500 warriors, they were ingloriously defeated with heavy loss by a party of Sauk and Fox numbering hardly a hundred, the result being due to the fact that the latter were armed with long-range rifles, while their enemies had only bows and arrows. Almost

every old man of the Kiowa now alive was in this battle, which is famous among all the tribes of the southern plains (see the calendar).

In the same year, according to Clark, a party of 113 Pawnee was cut off and slaughtered almost to a man by an overwhelming force of Cheyenne and Kiowa (*Clark, 19*). There is no record of this engagement on the calendars, although several minor encounters with the Pawnee are noted about this time.

HOSTILE DRIFT OF THE KIOWA

In the next few years we find little of importance recorded of the Kiowa beyond concurrent statements of both military and civil officials that they were growing constantly more insolent and unmanageable. In 1856 a war party of nearly one hundred arrived at Albuquerque, New Mexico, having passed through the center of the settlements of that territory, on their way to attack the Navaho. They were turned back by the military commander, committing several depredations as they retired (*Report, 5*). Two years later another large war party, together with some Cheyenne, passed Fort Garland, Colorado, almost on the great divide, in pursuit of the Ute (*Report, 6*).

DEFIANT SPEECH OF DO-HÁSÄN

On one occasion, during the distribution of the annuity goods on the Arkansas, when fifteen hundred lodges of Cheyenne, Arapaho, Comanche, Kiowa, and Apache were encamped along the river, the agent took the opportunity to tell the Kiowa as plainly as possible that if they did not cease their depredations the government would not only withhold their presents but would send troops to punish them. The great chief Dohásän, after listening in respectful silence to the end, sprang to his feet, and, calling the attention of the agent to the hundreds of tipis in the valley below, replied in a characteristic speech:



FIG. 44—Dohásän or Little-bluff, principal chief, 1833-1866 (after Catlin, 1834)

The white chief is a fool. He is a coward. His heart is small—not larger than a pebble stone. His men are not strong—too few to contend against my warriors. They are women. There are three chiefs—the white chief, the Spanish chief, and myself. The Spanish chief and myself are men. We do bad toward each other sometimes, stealing horses and taking scalps, but we do not get mad and act the fool. The white chief is a child, and like a child gets mad quick. When my young men, to keep their women and children from starving, take from the white man passing through our country, killing and driving away our buffalo, a cup of sugar or coffee, the white chief is angry and threatens to send his soldiers. I have looked for them a long time, but they have not come. He is a coward. His heart is a woman's. I have spoken. Tell the great chief what I have said (*Report*, 7).

SMALLPOX EPIDEMIC OF 1861-62

In the winter of 1861-62 the smallpox, brought back from New Mexico by a party of Kiowa returning from a trading trip, again ravaged the Kiowa, Comanche, and other tribes of the plains (see the calendar). To prevent a recurrence of the disease, the government soon afterward took measures for vaccinating the western Indians. In the summer of 1863 a delegation of Kiowa visited Washington and gave permission for the establishment of mail stations along the roads through their country in southeastern Colorado (*Report*, 8).

INDIAN WAR ON THE PLAINS, 1864

The chronic raiding still continued. In 1860 the troops had been ordered to chastise the Kiowa and Comanche, but apparently with little effect. Then came the rebellion, involving all the civilized and partly civilized tribes of the south and reacting on the wild tribes of the plains. At the same time the fugitive hostiles from the Sioux war in Minnesota in 1862, who had taken refuge with their western brethren of the same tribe, helped to increase the ferment. There is evidence also that agents of the Confederacy had something to do with this result. In the fall of 1863 it was learned that a combination had been formed by the Dakota, Cheyenne, part of the Arapaho, the Kiowa, Comanche, and Apache—all the principal fighting tribes—to inaugurate a general war along the plains in the spring. To meet the emergency, messages were sent out to the different tribes in June, 1864, directing all friendly Indians to repair at once to certain designated military posts, with a warning that all found away from these posts after a certain date would be considered hostile. As it was difficult for troops to distinguish one tribe from another, an order was issued at the same time prohibiting the friendly Indians in eastern Kansas from going out on their usual buffalo hunt upon the plains.

Only a part of the Arapaho, and later some of the Cheyenne, responded and came in. After waiting a sufficient time, Governor Evans of Colorado issued a proclamation in the summer of 1864 designating all Indians remaining out as hostiles, whom all persons were authorized to kill and destroy as enemies of the country, wherever they might be found (*Report*, 9). In August the agent at Fort Lyon,

Colorado, for the Kiowa, Comanche, Apache, Cheyenne, and Arapaho, wrote that "the orders are to kill every Indian found in the country, and I am inclined to assist in carrying the orders into effect" (*Report*, 10).

The official reports covering the summer of 1864 are full of notices of murders and depredations on the plains. The agent of the Overland Mail stated in August that as a consequence the company had been compelled to abandon all its stations for a distance of 400 miles, while every ranch within the same section had been deserted. He reported that the Indians "arrogantly declare that the land belongs exclusively to them; they intend to regain and hold it if they have to destroy every white man, woman, and child to accomplish their purpose. It would seem that the recent enormous emigration across the plains has alarmed many of the tribes and infused into their rude minds the belief that the whites were about to take possession of their country" (*Report*, 11). The great emigration referred to was in consequence of the rush to the gold mines of Pike's Peak, discovered in 1858.

VACCINATION AMONG THE PLAINS TRIBES—SET-T'AIÑTE

As usual, the Indians had deferred hostilities until the grass was high enough in the spring to enable their ponies to travel. In April a government physician, who had been sent among these tribes to vaccinate them as a protection from the smallpox which had recently decimated them, as already noted, found them all apparently friendly. From him we have an interesting description of the appearance and home life of the famous chief Set-t'aiñte. He writes from Fort Larned:

I have been two weeks among the Kiowas, about 40 miles up the Arkansas river. I was four days in Satana's [*Set-t'aiñte*] or White Bear's village, who is, I believe, their principal chief. He is a fine-looking Indian, very energetic, and as sharp as a brier. He and all his people treated me with much friendship. I ate my meals regularly three times a day with him in his lodge. He puts on a good deal of style, spreads a carpet for his guests to sit on, and has painted fireboards 20 inches wide and 3 feet long, ornamented with bright brass tacks driven all around the edges, which they use for tables. He has a brass French horn, which he blew vigorously when the meals were ready. I slept with Yellow Buffalo, who was one of the chiefs that visited Washington with Major Colley. They have quite a number of cows and calves and a good many oxen and some mules and American horses that they say they stole from Texas. A body of Kiowas and Comanches and some Cheyennes intend to make another raid into Texas in about five or six weeks.

It will be remembered that Texas was at this time in armed rebellion against the general government, a fact which confirmed the Indians in their belief that Texans and Americans were two distinct and hostile nations. With correct prophecy the doctor surmises that a successful result in the contemplated raid will encourage them to try their hand farther north. By this time he had vaccinated nearly all the Indians of the upper Arkansas (*Report*, 12). Fort Larned, in western Kansas, was then the distributing point for the goods furnished by the government to the Kiowa, Comanche, and Apache.

THE LITTLE ARKANSAS TREATY IN 1865

In a few months the grass was up and a change came o'er the spirit of the dream. Hostilities had begun on the plains, and in order that the innocent might not be punished with the guilty, the friendly tribes along the eastern border had been forbidden to go out into the buffalo country. This deprivation of accustomed privileges naturally caused



Photo by Soule, about 1870

FIG. 45—Set-t'aiñte (Satanta) or White-bear

great dissatisfaction among the friendly Indians, who had come to depend on their annual buffalo hunt to eke out their scanty food supply, and they complained bitterly that the government had been feeding and clothing the hostiles, while they themselves had been left to starve.

In a strong letter their agent writes that, while he has a desire to shield all Indians from wrong and severe treatment, yet "lead, and plenty of it, is what the Kiowas want and must have before they will behave." He denounces them as murderous thieves, and says that he has had personal experience of their insolence and outrages (*Report, 13*). The incidents of this war noted on the calendar are the encounter at Fort Larned, in which the Kiowa ran off the horses of the soldiers, and the attack on a Kiowa camp by a detachment of troops and Ute Indians under command of Kit Carson (see the calendar).

From the agent's report it appears that the Indians had begun hostilities in the summer simultaneously on the Platte and the Arkansas, and up to September had killed a number of people and run off several thousand head of horses, mules, and cattle. Communication between the Colorado settlements and the Missouri had been almost entirely cut off, the overland coaches had to be supplied with large escorts, and emigrant trains were compelled to combine for safety. It was thought that all the tribes of the plains were on the warpath together. The Indians were well mounted, knew the whole country perfectly, and so far, in every contest on anything like equal terms, had proven themselves a match for the white soldiers. As nearly the whole available force of the government was then employed in suppressing the rebellion, no additional troops could be sent to the frontier, and Governor Evans of Colorado asked and received permission to raise a force of volunteers against the hostiles. It was the opinion of many persons, including army officers stationed in the country, that the whole trouble might have been averted had the Indians been properly treated by the whites (*Report, 14*).

In spite of the serious condition of affairs it was evident that the chiefs did not want war. Early in September peace overtures were received from the Cheyenne and Arapaho, who soon after came in and camped as directed near Fort Lyon, Colorado. A month later the agent reported that the Kiowa and Comanche had committed no depredations for a long time and were supposed then to be south of the Arkansas, near the Texas border (*Report, 15*). Before the trouble began they had been encamped on the Arkansas, near Fort Larned. As the tribes had now expressed their desire for peace, a commission was sent out early in 1865 to meet them for that purpose. The commissioners met the Kiowa, Comanche, and Apache on August 15 at the mouth of the Little Arkansas, where now is the town of Wichita, Kansas, and received their promise to cease hostilities and to meet the same commission in October to make a regular treaty of peace. Three days later the Cheyenne and Arapaho entered into a similar agreement at the same place. The Kiowa chiefs signing the agreement were Dohásän as head chief, Gúi-pä'go ("Lone-wolf"), Sét-dayâ'-ite ("Many-bears"), Set-t'aiñte ("White-bear"), Te'né-angópte ("Kicking-bird"), and Set-ĩnkía ("Pushing-bear," commonly known as Stumbling-bear),

with Sét-tádal ("Lean-bear") for the Apache, and eight of the Comanche. Credit for this result is due largely to the efforts of agent Leavenworth, who secured a suspension of military operations while he went out to bring in the Indians, a matter of peculiar difficulty in view of their fresh recollection of the massacre of friendly Cheyenne by Colonel Chivington in the autumn of the preceding year (*Report*, 16).

Pursuant to agreement, commissioners met the five tribes in October, 1865, at the mouth of the Little Arkansas, where treaties were made with the Cheyenne and Arapaho on the 14th, with the Apache on the 17th, and with the Kiowa and Comanche on the 18th. By the treaty with the Apache they were officially detached from the Kiowa and Comanche and attached to the Cheyenne and Arapaho, who agreed to relinquish their reservation in southeastern Colorado for one farther south, in Kansas and Indian Territory. The Kiowa and Comanche agreed to remove south of the Arkansas, the reservation proposed for their future home being a tract in western Texas and Oklahoma, as follows: Commencing on the Canadian river where the eastern line of New Mexico crosses the same; thence running south along said line to the southern boundary of New Mexico; thence in a northeasterly direction to the headwaters of Big Wichita river; thence down said river to its mouth or its junction with Red river; thence due north to Canadian river; thence up the Canadian to the place of beginning. By this treaty, which was intended to be only temporary, they gave up all claims in Colorado, Kansas, and New Mexico, and were restricted to southwestern Oklahoma and the region of the Staked plain in Texas. Five white captives were surrendered by the Kiowa and Comanche at the same time (*Treaty*).

DEATH OF DOHÁSÄN

In the course of the talk Dohásän, on behalf of his people, made a vigorous protest against being confined to a reservation, claiming that the Kiowa owned from Fort Laramie and the North Platte to Texas and had always owned it, and that he did not want his country cut up and divided with other tribes or given to the white man; his people wanted a large country to roam over; they did not want to stay long in one place, but wanted to move about; the Santa Fé road was open and would not be disturbed, but the rest of their country he wanted let alone. Notwithstanding this protest the treaty was signed. Among others officially present were Kit Carson, William Bent, and Agent Leavenworth, with William Shirley and Jesse Chisholm as interpreters (*Report*, 17). Dohásän died shortly afterward, early in 1866, and with his death began the rapid decline of the Kiowa tribe. He was succeeded by Gúi-pä'go, "Lone-wolf," adopted father of the present chief of the same name. But the Indian day was drawing to a close. Within a few years the Kiowa were practically prisoners on a reservation, and their chiefs were the creatures of petty factions and mere figureheads in the hands of the government.

KIOWA RAIDS CONTINUED

As a result of these peaceful efforts, there were but few reports of disturbances during the next year, excepting from the incorrigible Kiowa. Notwithstanding all their promises, Set-t'aiñte led a war party into Texas and returned with five captives, a woman and four children, whom he brought into Fort Larned for ransom. The agent sharply reminded him of his promise to cease such acts, and demanded the surrender of the prisoners without compensation, whereon, under pretense of consulting the other chiefs, Set-t'aiñte took them to Fort Dodge, where the commander, compassionating their condition, rescued them for a large sum. In reporting the circumstance, their agent urges that it is high time the Kiowa were made to feel the strong arm of the government as the only means of bringing them to a sense of their duty, as they even went so far as to boast that stealing white women was a more lucrative business than stealing horses (*Report*, 18).

Other complaints came in during the next year, but full investigation by the military authorities satisfied them that with the exception of this raid by Set-t'aiñte the Kiowa and Comanche were innocent (*Report*, 19). Accordingly measures were taken to arrange a meeting with these tribes to establish more definite treaty relations, as contemplated in the provisional treaty of 1865. Preliminary to this meeting Agent Labadi, with a small party, went from Santa Fé across to the Texas border, where he met a large portion of the confederated tribes and urged on them the necessity of keeping peace with the government, at the same time demanding the free surrender of all white captives of the United States held by them, concluding by telling them that all of their tribes hereafter found north of the Arkansas would be treated as hostiles. After a conference among themselves, the chiefs agreed to deliver up the captives and end all difficulties, and arranged for a full meeting later, when some absent chiefs should have returned. In regard to the raids into Texas, they distinctly stated that they had been told by the military officers of the government to do all the damage they could to Texas, because Texas was at war with the United States (referring to the recent rebellion), and that until now they were ignorant that peace had been established. Although it is pretty certain that some of them at least had already been told that the rebellion was at an end, yet there can be no doubt that the peculiar relations which from the very beginning had existed between Texas and the general government furnished them a plausible excuse for the depredations (*Report*, 20).

THE TREATY OF MEDICINE LODGE, 1867, AND ITS RESULTS

The result of these negotiations was the treaty of Medicine Lodge on October 21, 1867, by which the Kiowa, Comanche, and Apache were officially confederated and agreed to come upon their present reserva-

tion (see the calendar). This treaty merits extended notice, inasmuch as it changed the whole status of the Kiowa and their allies from that of independent tribes with free and unrestricted range over the whole plains to that of pensioners dependent on the government, confined to the narrow limits of a reservation and subject to constant military and civilian supervision. For them it marks the beginning of the end. Moreover, on the provisions and promises of this treaty are based all the arguments for and against the late unratified agreement of 1892. It will be necessary first to review the situation.

For a number of years the Indian problem on the plains had been constantly growing more serious. The treatment accorded by Texas to her native and border tribes had resulted in driving them northward to the country of upper Red river and the vicinity of the Santa Fé trail, where they were a constant menace both to the trading caravans and to the frontier settlers of Kansas and Colorado. In addition to the old Santa Fé trail the thousands of emigrants to California and Oregon had established regular roads across the plains, in the north along the North Platte and in the south along the base of the Staked plain, while the discovery of gold in Colorado in 1858 brought a flood of white settlement into the very heart of the Indian country, driving away the buffalo and narrowing the range of the tribes. Encroachments and reprisals were becoming chronic, and it was evident that some arrangement must be made by which the wild tribes could be assigned a territory remote from the line of settlement and travel, where they might roam and hunt undisturbed, without danger of coming into collision with the whites.

The conditions a few years previous are well summed up by the veteran trader William Bent, at that time agent for the Cheyenne and Arapaho, in an official report dated October 5, 1859. In it he says:

The Cheyenne and Arapahoe tribes scrupulously maintain peaceful relations with the whites and with other Indian tribes, notwithstanding the many causes of irritation growing out of the occupation of the gold region, and the emigration to it through their hunting grounds, which are no longer reliable as a certain source of food to them. These causes precipitate the necessity of immediate and sufficient negotiations for the safety of the whites, the emigrant roads, and the Indians. . . .

The Kiowa and Comanche Indians have for two years appeared in full numbers and for long periods upon the Arkansas, and now permanently occupy the country between the Canadian and Arkansas rivers. This is in consequence of the hostile front opposed to them in Texas, by which they are forced toward the north, and is likely to continue perpetual. . . . A smothered passion for revenge agitates these Indians, perpetually fomented by the failure of food, the encircling encroachments of the white population, and the exasperating sense of decay and impending extinction with which they are surrounded. . . .

I estimate the number of whites traversing the plains across the center belt to have exceeded sixty thousand during the present season. The trains of vehicles and cattle are frequent and valuable in proportion. Post lines and private expresses are in constant motion. The explorations of this season have established the existence of the precious metals in absolutely infinite abundance and convenience of position. The concourse of whites is therefore constantly swelling and incapable of control or

restraint by the government. This suggests the policy of promptly rescuing the Indians and withdrawing them from contact with the whites, as the element capable of such immediate management as may anticipate and prevent difficulties and massacre. I repeat, then, as the suggestion of my best judgment, that immediate and sufficient steps be taken to assemble and finally dispose of these particular tribes of Indians, viz, the Kiowa and Comanches, the Cheyennes, and the Arapahoes, by reducing them, under treaties and arrangements, to become agricultural and pastoral people, located within specific districts, judiciously selected and liberally endowed, to which they shall be restricted and the white men excluded from among them. These numerous and warlike Indians, pressed upon all around by the Texans, by the settlers of the gold region, by the advancing people of Kansas and from the Platte, are already compressed into a small circle of territory, destitute of food, and itself bisected athwart by a constantly marching line of emigrants. A desperate war of starvation and extinction is therefore imminent and inevitable unless prompt measures shall prevent it (*Report, 21*).

Despite this warning no steps were taken toward a remedy, and in April, 1864, the irritation resulted in a war with the Cheyenne, speedily involving also the Arapaho, Kiowa, Comanche, and Apache, with several bands of the Dakota. The most memorable incident of this war was the massacre of 120 friendly Cheyenne, encamped under the protection of the United States flag, near Fort Lyon, on Sand creek, Colorado, by Colorado militia under Colonel Chivington, on November 29, 1864. Hostilities ended with treaties made with the five tribes chiefly concerned at the mouth of the Little Arkansas (now Wichita, Kansas), in October, 1865, as already noted. Short as the war had been, it had cost the government over \$30,000,000 and an unknown number of lives (*Report, 22*).

From this time the Kiowa, Comanche, and Apache, as tribes, remained quiet, according to the terms of the treaty, but it was otherwise with the more northern Indians, who found themselves subjected to constant aggressions in spite of all agreements. In July, 1866, a war broke out with the Sioux, and in April, 1867, it spread to the Cheyenne and Arapaho. Leading incidents of these campaigns were the massacre of Lieutenant-Colonel Fetterman's whole command at Fort Phil. Kearney, December 21, 1866, and the burning of a large Cheyenne village on the Pawnee fork, by General Hancock, in April, 1867 (*Report, 23*).

At this stage of affairs Congress appointed a commission to establish peace with the hostile tribes, by first ascertaining their grievances and then making such treaties as would remove the causes of dissatisfaction and afford protection to the frontier settlements, emigrant roads, and railroads by assigning to the tribes reservations where they could remain undisturbed in the future. This commission consisted of N. G. Taylor, president, John B. Sanborn, Samuel F. Tappan, J. B. Henderson, and Generals William S. Harney, Alfred H. Terry, and C. C. Augur. Notwithstanding open war was in progress, they found no difficulty in effecting friendly meetings with the various tribes. In September and October, 1867, the commission held councils with the Sioux and Crows and made treaties with the Cheyenne and Arapaho,

and with the Kiowa, Comanche, and Apache, these being the treaties under which the latter tribes hold their present or recent reservations and draw their annuities.

In regard to the Kiowa, Comanche, and Apache, the commissioners state that from the testimony they were satisfied that these tribes had substantially complied with the terms of their treaty made two years before on the Little Arkansas, the only serious violation being the killing of James Box and the capture of his family in western Texas in August, 1866. This is the Set-t'aiñte raid already noted. As excuse for this, the commissioners state, the Indians urged that they supposed an attack on Texas people would be no violation of a treaty with the United States—that as we ourselves had been at war with the people of Texas, an act of hostility on their part would not be disagreeable to us. In regard to numerous other misdeeds credited to these tribes, they state that the evidence pretty clearly demonstrates that the charges were almost entirely without foundation (*Report*, 24).

After visiting some of the northern bands, the commissioners went to Fort Larned, Kansas, whence they sent messengers to the Cheyenne and Arapaho, Kiowa, Comanche, and Apache, notifying them of their arrival and purpose. They then proceeded to the general tribal rendezvous on Medicine-lodge creek, about the present site of Medicine Lodge, Barber county, Kansas, where they met the Indians, and the treaties were made (see the calendar).

A treaty was first made with the Kiowa and Comanche on October 21, 1867, and by a supplementary treaty made immediately afterward on the same day, the Apache, at their own request, were formally confederated and incorporated with them instead of with the Cheyenne and Arapaho, with whom they had been united by the treaty of the Little Arkansas two years before. The Kiowa, Comanche, and Apache together signed the treaty of confederation, which was proclaimed August 25, 1868. At the same council meeting was made the similar treaty with the Cheyenne and Arapaho, by which those tribes held their late reservation and became entitled to their current annuities. These treaties superseded all previous agreements (*Treaties*).

The Kiowa, Comanche, and Apache treaty provides for peace and mutual good will, and stipulates that the Indians shall refrain from further attacks on the whites, and withdraw all opposition to the construction of railroads and other roads and the building of military posts in the western country, then or afterward to be authorized by the government. The usual provision is made for an agency, schools, farmers, doctor, blacksmith, etc. Article 6 provides for the selection of farming tracts within the proposed reservation, to be recorded and held as the individual property of such Indians as may desire to become farmers.

Article 2 sets apart for the use of the three confederated tribes their present reservation, bounded on the east by the ninety-eighth meridian,

on the south and west by Red river and its North-fork, and on the north by the Washita from the ninety-eighth meridian up to a point 30 miles by river from Fort Cobb, and thence by a line due west to the North fork. All within these bounds is solemnly "set apart for the undisturbed use and occupation of the tribes herein named, and for such other friendly tribes or individual Indians as from time to time they may be willing, with the consent of the United States, to admit among them; and the United States now solemnly agrees that no persons except those herein authorized so to do, and except such officers, agents, and employés of the government as may be authorized to enter upon [the] Indian reservation in discharge of duties enjoined by law, shall ever be permitted to pass over, settle upon, or reside in the territory described in this article, or in such territory as may be added to this reservation, for the use of said Indians."

By article 10 all obligations incurred by the United States under previous treaties are canceled, and instead the government agrees to deliver at the agency, "on the 15th day of October of each year, for thirty years," the equivalent of a full suit of clothing for each Indian man, woman, and child, for which purpose the agent is to make an annual census of the tribes; "and in addition to the clothing herein named, the sum of twenty-five thousand dollars shall be annually appropriated for a period of thirty years" for the judicious purchase of such articles as may seem proper to the condition and necessities of the Indians. Provision is made for the expenditure of a portion of the clothing fund in other ways for the benefit of the Indians, whenever, within the period of thirty years, it might seem advisable, "but in no event shall the amount of this appropriation be withdrawn or discontinued for the period named." All annuity issues were to be made in the presence of an army officer detailed for the purpose, who should inspect and report on the quantity and quality of the goods and the manner of their delivery.

Provision is also made for establishing a sufficient number of schools to continue for a period of not less than twenty years. The Indians agree to surrender all claims to lands outside the reservation as established in article 2, retaining, however, some temporary hunting privileges south of the Arkansas. Several minor details are specified, and by article 12 it is stipulated that no treaty for the sale of any portion of the reservation thus agreed upon shall have force or validity "unless executed and signed by at least three-fourths of all the adult male Indians occupying the same."

The Kiowa signers were ten in number, of whom only Set-ĩmkía was still alive in 1896. Their names were:

Set-ä'ngya, "Sitting-bear" (Satank).

Set-t'aiĩte, "White-bear" (Sa-tan-ta).

Gúato-kóñgya, "Black-bird" (Wa-toh-konk, or Black Eagle).

T'ene'-angópte, "Kicking-bird" (Ton-a-en-ko, or Kicking Eagle).

Taká-i-bodal, "Spoiled-saddle-blanket" (Fish-e-more, or Stinking Saddle).

Mäñyí-tén, "Woman-heart" (Ma-ye-tin).

Set-ĩmkía, "Pushing-bear" (Sa-tim-gear, or Stumbling Bear).

Set-pä'go, "Lone-bear" (Sit-par-ga, or Sa-pa-ga, or One Bear).

Gaá-bohón, "Crow-bonnet" (Corbeau, or The Crow).

Set-emâ'-i, "Bear-lying-down" (Sa-ta-more).

The Apache signers were:

Babí pa (Mah-vip-pah, Wolf's Sleeve).

Gúañtekána (Kon-zhon-ta-co, Poor Bear).

Chónshitá (Cho-se-ta, or Bad Back).

———— (Nah-tan, or Brave Man).

———— (Ba-zhe-ech, Iron Shirt).

Tĩ'l-'lakaí (Til-la-ka, or White Horn).

The Comanche signers, of whom only Howia was alive in 1896, were:

Päriäséaman, "Ten-elks" (Parry-wah-say-men, or Ten Bears).

Tĩ'pinävón (Tep-pe-navon, or Painted Lips).

Tä'sawi (To-sa-in, To-she-wi, or Silver Brooch).

Síachĩ'nika, "Standing-head-feather" (Cear-chi-neka).

Howía (Ho-we-are, or Gap in the Woods).

Tüyăkwoip, "Sore-backed-horse" (Tir-ha-yah-guahip, or Horse's Back).

Īsană'naka, "Wolf-noise" (Es-a-nanaca, or Wolf's Name).

Ātéstisti, "Little-horn" (Ah-te-es-ta).

Púiwí-tóyăbi, "Iron-mountain" (Pooh-yah-to-yeh-be).

Sä'riyo, "Dog-fat" (Sad-dy-yo).

In addition to the signatures of the commissioners the treaty bears the names of a number of witnesses, some of them noted in the pioneer history of the southwest, including Thomas Murphy, superintendent of Indian affairs, J. H. Leavenworth, agent for the three tribes, and Philip McCusker, the interpreter, well known in connection with these tribes until his death in 1885.

RENEWED HOSTILITIES

As no arrangements had yet been made for the removal of the Indians to the south, most of them remained encamped on the Arkansas until June, 1868, when the Cheyenne became involved in difficulty with the military, resulting in their flight southward to the Canadian and Washita. On the return of the unsuccessful war party against the Ute, in which Setdayâ'ite had been killed, as narrated in the calendar for that year (see the calendar), the Kiowa also left the Arkansas and removed to the south, thus anticipating measures by General Sherman to drive all these tribes by military force upon the new reservations assigned them by the late treaty, notwithstanding the fact that neither agency buildings nor agents were yet established on either reservation. In pursuance of this policy, General Sherman, in September, asked to

have all issues whatever to any of these tribes withheld until they had concentrated near Fort Cobb on the Washita, and announced that after waiting a sufficient time for them to reach that point he would solicit an order declaring all Indians outside these reservations to be outlaws, "and recommending all people, soldiers, and citizens to proceed against them as such." He also proposed to declare forfeited the hunting privileges outside these boundaries, guaranteed under the treaty. Despite the agent's protest that the Kiowa, Comanche, and Apache had done nothing to deserve such treatment, and the statement of the acting commissioner that Fort Cobb was not on the Cheyenne and Arapaho reservation at all, military operations were begun in September, with this purpose in view, with the result that all five tribes were again involved in war (*Report*, 25).

However peaceable the Kiowa and Comanche may have been on the Kansas frontier at this time, they were insolent enough in the south, for, in addition to raids into Texas, the agent for the Wichita and associated tribes, which had recently been removed to the vicinity of Fort Cobb, reports that they had plundered the Wichita of nearly everything, burned the agency, and forced the employees to leave to save their lives (*Report*, 26).

BATTLE OF THE WASHITA—REMOVAL TO THE RESERVATION

The command of operations in Indian Territory was given to General George A. Custer, who left Fort Dodge, Kansas, with eleven troops of the Seventh cavalry and twelve troops of Kansas volunteers, and after establishing Camp Supply, started on a winter campaign, intending to strike the Indians when they would be least prepared for defense or flight. The result was the "Battle of the Washita," on November 27, 1868, in which the Cheyenne village under Black-kettle was surprised and totally destroyed, one hundred and three warriors, including Black-kettle himself, being killed, a number of prisoners taken, and nearly a thousand ponies captured and shot, thus practically rendering the survivors helpless. The engagement occurred on the south bank of the Washita, in Oklahoma, just above Sergeant-major creek. Most of the Arapaho, Kiowa, Comanche, and Apache were camped below along the river for a distance of several miles; the whole forming the winter camp of the allied tribes. The Kiowa, who were nearest, prepared to attack, but, being taken at a disadvantage, agreed to go with the troops to Fort Cobb, the proposed agency. Instead of doing this, however, the warriors sent their families with their movables in a contrary direction and attempted to slip away themselves in small parties until Custer seized Lone-wolf, the head chief, and Set-t'aiñte, next in authority, and threatened to hang them both unless the absentees delivered themselves at Fort Cobb within two days. This brought matters to a head, and the whole tribe, excepting a band which fled under Woman-heart (*Māñyi-tén*) toward the Staked plain, came in and

surrendered at Fort Cobb within the time specified, about the end of December, 1868. The two chiefs were thereupon set at liberty. Most of the Comanche and Apache had already come in immediately after the Washita fight. The Cheyenne and Arapaho fled to the head of Red river, where they were followed by Custer, and were brought in later to their own reservation (*Custer, 1; Record, 1*). As an effective means of holding these tribes in check for the future, Fort Sill was established in the spring of 1869, nearly in the center of the reservation, with the agency for the Kiowa, Comanche, and Apache adjoining.

FURTHER INSOLENT OF THE KIOWA—RAIDS INTO TEXAS

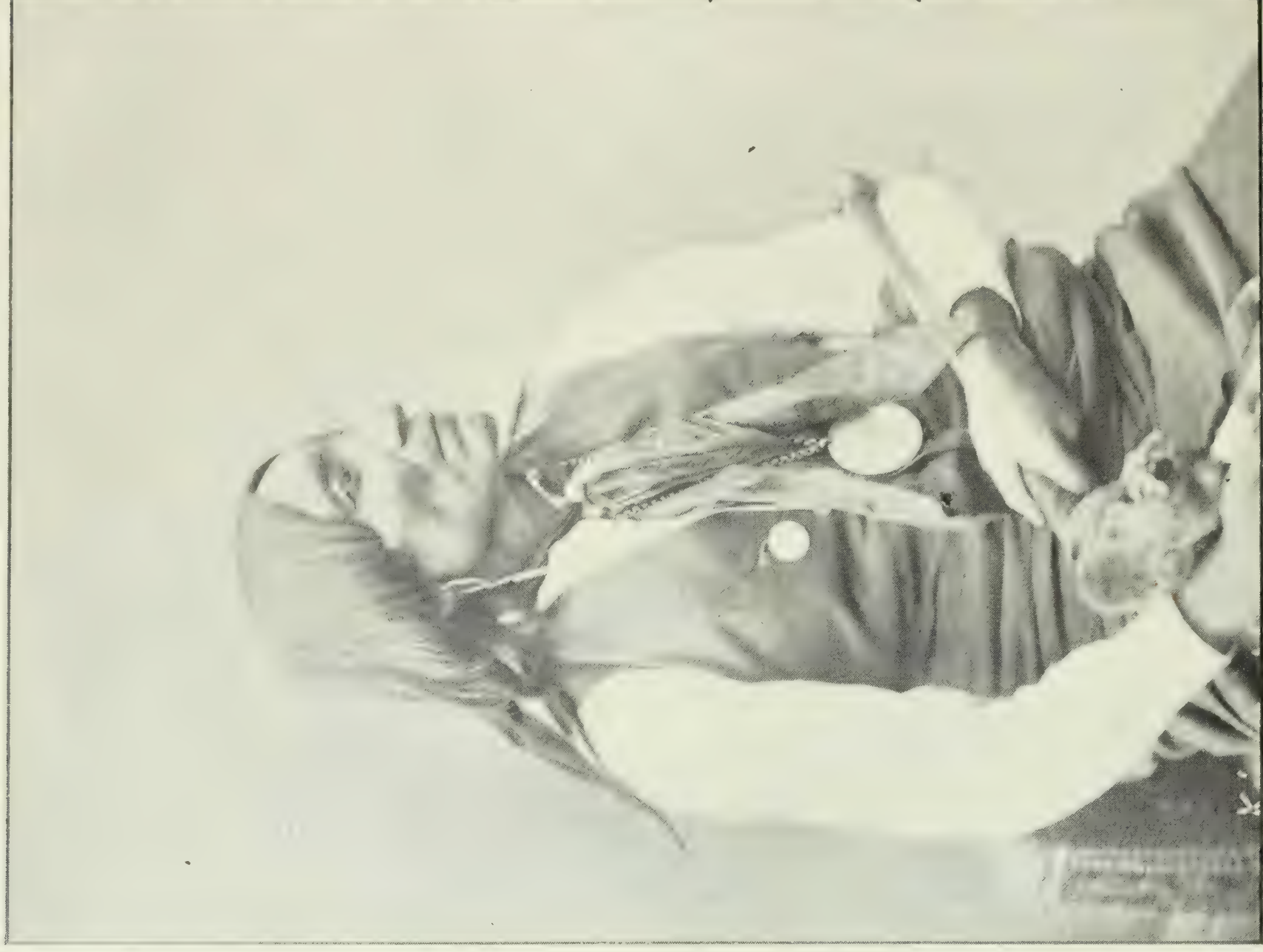
Although they had been compelled to settle on a reservation, the Kiowa continued their raids into Texas, destroying property, killing white people, and carrying away captives. On one occasion they even attacked the agency at Fort Sill, killed and wounded several men, stampeded the agency cattle and the quartermaster's mules, and defiantly challenged the soldiers to come out and fight. Civil and military officials alike agree that there was not the slightest excuse for these outrages, to which they were encouraged by the Kwáhadi Comanche, who had never yet come in from the Staked plain and who never ceased to ridicule those Indians who had submitted. To put an end to this state of affairs, the Commissioner in 1870 recommended the establishment of a line of posts along the southern boundary of the reservation, and that the Kiowa and Comanche should all be placed under military control until they had learned to behave properly (*Report, 27*).

Affairs went on from bad to worse. In 1871 a large raiding party killed seven men in Texas, torturing one over a fire, and capturing a number of mules. The leaders had the hardihood to boast of their deed in the presence of the agent and General Sherman, who promptly arrested the three most prominent, Set-t'aiñte, Setängya, and Ä'do-eétte or "Big-tree." Setängya (Satank) resisted and was killed. The other two were sent to Texas for trial and punishment (see the calendar).

In 1872 another Commissioner declared that the point had been reached where forbearance had ceased to be a virtue, and again recommended that the three tribes be turned over to the military for punishment. He states that a wholesome example is absolutely necessary to command obedience, asserting that "so long as four-fifths of these tribes take turns at raiding into Texas, openly and boastfully bringing back scalps and spoils to their reservation, efforts to inspire very high ideas of social and industrial life among the communities of which the raiders form so large a part will presumably result in failure." At the same time their agent reports that, although they had come regularly for their rations during the preceding winter and spring, giving repeated assurance of amity and peace, yet so soon as their horses were in condition in summer the Kiowa had gone on the warpath, taking with them a large number of the Comanche and Apache, and



PHOTOS BY JACKSON, 1872



GUI-PÄGO OR LONE-WOLF, PRINCIPAL CHIEF, 1866-1874

within a few months had stolen hundreds of horses and mules, carried off several captive women and children, and killed over twenty persons in Texas, besides others in New Mexico and elsewhere. By withholding rations for three months, he had compelled them to bring in two captives without ransom, and states that he would continue to with-



Photo by Soule, about 1870

FIG. 46—Set-ängya (Satank) or Sitting-bear

hold supplies from them until the other was surrendered. He declared, finally, that the Kiowa and some bands of the Comanche were beyond control by him (*Report*, 28). The calendar for this year (q. v.) also takes note of these raids.

INTERTRIBAL PEACE COUNCIL, 1872

In the summer of 1872 the general council of the civilized tribes of Indian Territory sent a commission to the wild tribes in the western part of the territory to urge them to a permanent peace among themselves and with the United States. This Indian commission met the chiefs and headmen of the Caddo, Wichita, and affiliated tribes, the Cheyenne and Arapaho, and the Kiowa, Comanche, and Apache, together with their agents, near Fort Cobb, in July and August, and had several talks with them, resulting in a general friendly feeling among the tribes, but without any very substantial outcome in regard to the Kiowa, who demanded the release of Set-t'aiñte and Big-tree as a preliminary to negotiations. They did surrender two white captives, as already stated, but this appears to have been due to the stoppage of rations by the agent rather than to the efforts of the peacemakers. Notwithstanding the rose-colored report of the commission, we learn from the agent that while Kicking-bird, as always, was on the side of peace, White-horse (*Tseñ-t'aiñte*), the notorious raider, declared that the old chiefs might make peace, but he and the young men would raid when they chose, while Lone-wolf, the head chief, declared that they would not make peace or return their captives until Set-t'aiñte and Big-tree were released and the Kiowa reservation extended from the Rio Grande to the Missouri. He modified his terms, however, when he found that all rations and annuities were to be cut off until the captives were unconditionally released (*Report*, 29). About the same time the Kiowa invited the Cheyenne to join them in forming a combination of the southwestern tribes to make war on the whites and effect the release of the imprisoned chiefs, but the Cheyenne refused the proposition (*Report*, 30).

Soon after, in the same year, another commission was sent out from Washington to the same tribes to discuss with them the subject of their own and the government's treaty obligations, and to warn them in plain terms that unless they ceased their raids outside their reservations the military would be directed to begin active operations against them, and that all parties hereafter leaving the reservation to go into Texas would be considered as hostiles to be attacked without inquiry and to be followed into their camps, if necessary, for punishment.

JOINT DELEGATION TO WASHINGTON, 1872

An important object of the commission was to obtain a good representative delegation of the several tribes to visit Washington, with the view of impressing them on the way with the strength of the whites, in order to obtain a better understanding on their arrival. Although the other tribes generally responded promptly and satisfactorily, the Kiowa, as usual, were disposed to be perverse. At last, however, a party, including Lone-wolf, Woman-heart, Red-otter (*Ápeñ-gúadal*),



PHOTO BY LANNEY, 1892

TSEN-T'AIÑTE OR WHITE-HORSE

Dohásän (son of the former great chief), Sun-boy (*Paí-tülyí*), Stumbling-bear, and others, met the commission on the Washita and consented to send delegates to Washington on the promise that their imprisoned chiefs, Set-t'aiñte and Big-tree, should be allowed to meet



Photo by Soule, about 1870

FIG. 47—Tseñ-t'aiñte or White-horse

them at some point on the way, or that if five delegates were sent, the prisoners should be allowed to accompany them. A delegation had been selected to start for the east in September, when a rumor came of

a movement of troops in the vicinity of their remoter camps, with the result that a number of the assembled Indians stampeded, including several of the promised delegates. The Kiowa delegation, as it finally left, consisted of four men—Lone-wolf, the head chief, Sun-boy, *Gui-k'ate* ("Wolf-lying down," improperly rendered "Sleeping-wolf") and one other. The Apache delegates were Pacer, Daho, and Gray-eagle.



Photo by Soule, about 1870

FIG. 48—A'do-eétte or Big-tree

In accordance with the promise, the two imprisoned chiefs were sent on under guard to St Louis, where they were allowed to see and talk with their friends, after which they were returned to the custody of the governor of Texas. The whole delegation, which was the largest and most important that had ever visited Washington, included representa-



PHOTO BY JACKSON, 1872

GUI-K'ÁTE OR SLEEPING-WOLF (WOLF-LYING-DOWN) AND WIFE

tives of all the southern plains tribes, excepting the Cheyenne and the Kwáhadi Comanche of the Staked plain. The latter had never entered into a treaty and refused to be settled on a reservation, although protesting their desire to be at peace. Whatever hopes may have been built on these negotiations, the events of the next two years would seem to prove to have been futile.

THOMAS C. BATTEY, FIRST TEACHER AMONG THE KIOWA, 1872

In December, 1872, Thomas C. Battey, a Quaker, the first teacher who made any impression on the Kiowa, came among them after a short sojourn with the Caddo, and remained about eight months. Although he accomplished little in the way of education, owing to the restless nomadic habits of the tribe, his influence with Kicking-bird (*T'ené-angópte*) probably kept that chief and his band from the warpath in the outbreak of 1874. He has left a most interesting and valuable narrative of his experiences among the Kiowa, who still hold him in friendly remembrance as *Támisi* (see *Battey*).

REPORT OF CAPTAIN ALVORD

The report of Captain Alvord, chairman of the commission, in regard to the Kiowa, is a good summary of the situation as concerns them up to date. He says:

The Kiowas, from their present attitude and their conduct during the last two or three years, demand especial consideration. The tribe numbers about 1,200. In 1868 they barely avoided a serious conflict with the United States troops, and, although the larger part of them were brought to within a reasonable distance of their agency, and suitably located in the spring of 1869, they soon returned to their favorite range between the Wichita mountains and the eastern slope of the Staked Plains, whence unrestrained they have most of the time since made frequent and successful expeditions in different directions, chiefly into Texas. To a certain extent they are subdivided into bands, and the chiefs of these have evinced different degrees of friendship, but it would be impossible to deal with them otherwise than as a tribe.

As already stated, their hostilities of the past year were pursuant to their deliberate decision, and it is safe to state that at least one-half of the terrible scenes of blood, fire, and pillage which they have caused have never yet been reported to the Department. The cold-blooded murders of inoffensive persons known to have been committed by them within two years approach a hundred, and they have now in their herds not less than a thousand stolen horses and mules, including over two hundred taken within a few months from the troops and agencies in their vicinity.

Lately they have yielded to a demand made upon them and given up the only white captives known to be among them, and there is no doubt that the present delegation, with the man at its head acknowledged as the principal chief of the tribe, will make every profession of friendship in the future and be anxious to cry quits and begin anew on peace terms. Nevertheless, while I desire to give this people all the credit they deserve, the opinion is very positively expressed that these apparently friendly acts on their part are no guarantees for the future, but simply repetitions of their conduct every autumn, when it is highly important to them to place themselves in position to receive during the winter months the material aid in subsistence and clothing afforded by the government. Gladly will they offer this fall certain terms of peace, but these will be found wholly in their favor—entire forgiveness for all

past offenses, the possession of the greater portion of their stolen property, and full restoration to the rights and privileges of the plains Indians in general. But the promises of future good conduct will be utterly worthless, and, these terms granted, there will be every prospect of a renewal of their depredations as soon as the early grass recuperates their stock and they find themselves able to subsist on the prairies.

The present position of the Kiowas may not be exactly one of open hostility, but it is certainly nothing less than the most offensive insubordination. Their agent for the past three years, a sincere member of the Society of Friends, a man who has proved himself eminently fitted for the place, declares this tribe uncontrollable, and states his belief that nothing less than military authority, with perhaps some punishment by troops, will bring them into such subjection as to again render the services of a civil agent of benefit to them.

The Kiowas have no shadow of excuse for their conduct. For three years they have received their annuity goods, of proper quantity and quality; have drawn their rations regularly until their action last spring compelled their agent to refuse them; and in no way have they received any injury from the government troops or agents. The arrest of two of their chiefs under due process of law, with their subsequent trial and conviction in the state of Texas, must not be forgotten; but the government at once interceded and secured a commutation of their sentence, and the Kiowas were informed that the fate of their chiefs depended on the future action of the tribe. This can in no way be considered an excuse for them, uncivilized as they are, and as a pretext it but makes their conduct worse.

It is not only recommended, but strongly urged, that the United States government no longer receive their proffer, but dictate to this tribe its own terms of settlement, making sure guarantees of safety to the lives and property of its citizens in the future.

I recommend that the representatives of the Kiowas now in Washington be told, in the presence of the entire delegation, that the government proposes to dictate its own terms to that tribe, and that they be the following: The entire tribe to encamp before November 30 at some suitable point near Fort Sill (for instance, Crawford's creek), where every movement can be watched by troops. All horses or mules found in their herds, undoubtedly taken from the government and from private parties during the past two years, to be given up within the same time, and the tribe to make good from their other stock any such animals found with other tribes, by them obtained from the Kiowas—and the tribe to surrender to the proper authorities, for trial by United States courts, the three most prominent men of those engaged in the greatest atrocities during the past year. Also, that they be told that the recent conduct of the tribe prevents all present hope of the release of their two prisoner chiefs, and that the liberty of those and the others to be given up will depend entirely upon future good behavior. Also, that no annuity goods whatever be issued to them for the present year, and that hunting parties be allowed to leave camp only when accompanied by a proper detachment of troops.

It is recommended that the necessary arrangements be made at once to have a sufficient body of troops in readiness to enforce compliance with these terms. If such a force is known by the Indians to be prepared to move by the 20th of November, it is believed that the terms will be complied with on time. Otherwise the movement should take place promptly on the 1st day of December, and under a judicious officer the tribe can be reached and compelled to yield with very little probability of an actual conflict. As elsewhere suggested, it would be desirable to have a proper representative of the Indian office accompany the troops.

Should these recommendations be approved, it would be well also to notify them that, having come or been forced into camp as proposed, they will be closely watched, and any movement, great or small, not fully authorized by whoever has them in charge, will subject the movers to immediate attack.

It is deemed especially important that the decision of the department as to the course it will pursue toward the Kiowas be fully explained to them, and to the

Apaches and Comanches, before the present delegation returns to the territory, and that all the other tribes be warned that, in case of any resistance on the part of the Kiowas, any Indians found aiding or communicating with them will be summarily dealt with (*Report*, 31).



Photo by Soule, about 1870

FIG. 49 — "Ka-ati-wertz-ama-na—A brave man, not afraid of any Indian"¹

RELEASE OF SET-T'AIÑTE AND BIG-TREE, 1873

The principal event of 1873 was the release and return to their people of the chiefs Set-t'aiñte and Big-tree, who had been imprisoned in Texas under jurisdiction of the state authorities (see the calendar).

¹ The name given is a Comanche corruption.

On the assurance given to the delegates in Washington that their chiefs would be restored to them in the spring, provided the tribe remained peaceably on the reservation in the meantime, the Kiowa had conducted themselves properly through the winter. With spring, however, came



Photo by Soule, about 1870

FIG. 50—T'ené-angópte or Kicking-bird

the Modok war, with the killing of General Canby, which created such a distrust of Indians in general that the people of Texas were unwilling to surrender the prisoners, whom they regarded as hostages for the safety of the frontier. Notwithstanding their disappointment, the Kiowa remained quietly at home, patiently waiting until the govern-

ment should bring influence to bear on the governor of Texas to redeem its promise. The prisoners, accompanied by Governor Davis of Texas and the Indian Commissioner, were at last brought to Fort Sill, where a council was held with the Kiowa in October. At the opening of the council the governor of Texas made a number of hard demands as preliminary to the surrender of the chiefs, although the government had already promised their unconditional release in consideration of the good conduct of the tribe during the last year. Some of these conditions were practically impossible, and for a time it seemed as if the whole purpose of the negotiations would be defeated, Kicking-bird, the leader of the friendly element, declaring that the government had lied and that the white man was no longer his friend, while Lone-wolf threatened war even though it should mean the destruction of their people. It became evident that there would be a desperate encounter if the chiefs were not now set free as promised, and on the earnest representations of the Indian Commissioner the governor finally yielded in his demands, and Set-t'aiñte and Big-tree were released from custody on October 8, 1873, subject, however, to rearrest by the state of Texas whenever it should appear that any of the Kiowa had again been raiding there. Although this condition was in violation of the promises made by the government, the Indians were compelled to be satisfied. An unsuccessful attempt was made by the governor to force the Comanche, by the delivery of hostages, to similar conditions. To show their good will, however, a party of Comanche volunteered to assist a detachment of troops in bringing in any of their young men who might then be raiding in Texas. During their absence on this errand a party of Texans visited the reservation and ran off two hundred horses and mules (*Report*, 32; *Battey*, 1).

The Quaker teacher, Battey, who was present during the council, thus describes the release of the chiefs:

Satanta and Big Tree, after embracing the governor, proceeded to embrace the chiefs present, and immediately returned with them to the agent's office, from whence they went to their rude home in their camps. The reunion of these chiefs with their tribe and families was impressive and affecting in the extreme. Joy beamed upon every countenance, and their happiness was exhibited, as might be expected, in the most wild and natural manner.

Reports continued to fill the newspapers of renewed raids into Texas by Set-t'aiñte and Big-tree, when, Battey asserts—

To my certain knowledge the latter was at home, sick in his lodge, and the former enjoying, after two years' confinement in prison, the pleasures of the buffalo chase, on territory assigned for the purpose (*Battey*, 2).

HAWORTH'S ADMINISTRATION—1873-78

At this time the various agencies were in charge of agents nominated by different religious bodies in accordance with the "peace policy" inaugurated by President Grant. The agent for the Kiowa, Comanche, and Apache was J. M. Haworth, nominated by the Society of Friends,

of which body his acts show him to have been a consistent member, who held charge for five years, from April, 1873, to April, 1878, including the troublous period of the outbreak and subsequent readjustment. In spite of the many difficulties at the time, he soon gained the confidence of these wild and warlike people, and conceived and successfully inaugurated the first substantial work of civilization among them in the way of schools, farming and stock raising, and the building up of friendly relations with the whites. He is held in grateful memory among the Kiowa, who know him as *Sénpo gúadal*, "Red-beard." An extract from his first report shows the spirit in which he met them and their quick response:

When I took charge, I told the Indians in council that I had come among them as their friend and desired us to live together as friends. As a proof of my confidence in them, I had the soldiers whom I found on duty removed, and relied upon them to conduct themselves in a peaceable and friendly manner; told them with their help we could make this a peaceable country to live in. I desired them to refrain from raiding or stealing. The chiefs promised me assistance; said if their young men would not listen, but ran off and stole horses, they would bring in to me all they brought back, and I could restore them to their owners. A short time ago I reminded the Comanches of their promise—told them I had heard some of their young men had been in Texas and brought back a number of horses. Within two weeks from the time I spoke to them fifty-two head of horses and mules were delivered to me as having been stolen from Texas since I came in charge as agent. I did not make any threats of stopping rations, or anything of the kind; simply reminded them of their promises and appealed to their better natures, with the very satisfactory result referred to (*Report*, 33).

FIRST SCHOOL ESTABLISHED BY BATTEY

Early in 1873 also, another Quaker, Thomas C. Battey, attempted the first school work among the Kiowa, as already noted. Although a conscientious worker, the force of their wandering habits and Indian beliefs was still too strong, and the effort in its direct purpose was a failure. He remained with them some months, however, and the good impression he made had much to do with keeping the larger portion of the tribe from the warpath in the subsequent outbreak. He thus sums up his school experiment:

Having erected a tent and fitted it up, I commenced a school with twenty-two children in attendance, which continued for something over a week, during which time the children manifested their aptitude to learn by the progress they made. The elder people also manifested much interest in it by their frequent visits, their attention to the exercises, and their encouraging words to the children. About this time, much sickness prevailing among the children in the camp, some superstitious Cad-does who happened there attributed the sickness among them to me, telling them I was a bad medicine man and had made some of their children sick when I was with them, two of whom died. This had the effect to entirely break up the school, though I continued my efforts to renew it for nearly two months. Sometimes when I would get a few children collected, they would be driven out by their old men. Sometimes young men would come in, laugh at them, and abuse them until they would leave. After about two months they became more unsettled, moving from place to place almost continually, searching for better grass for their stock, better water, more wood, to get buffalo, etc. As we were seldom but a day or two in a place, I gave up all effort to sustain a school (*Battey*, 3).

THE OUTBREAK OF 1874-75

CAUSES OF THE DISSENSION

But events were steadily drifting toward war again and the truce was of brief duration, the unrest culminating in the general revolt commonly known as the outbreak of 1874. As this was the last, and will forever remain the last, combination of the southern plains tribes against the power of the white man, resulting in their complete and final subjection, it merits somewhat detailed attention.

In late raids into Texas several of the Comanche had been killed by the hated Tonkawa, a small cannibal tribe, in their capacity of government scouts (see the calendar, 1873-74). The wailing laments of the Comanche women for their dead, and their appeals for vengeance, urged the warriors to go down once more into Texas and exterminate the remnants of the man-eaters who had escaped the massacre of twelve years before. To add to their discontent, a lawless band of hunters organized in Dodge City, Kansas, had, in the spring of 1873, established an adobe fort, known as the "Adobe Walls," on the South Canadian, in the panhandle of Texas, from which headquarters they were making inroads on the guaranteed hunting grounds of the Indians and were slaughtering the buffalo by thousands, in defiance of the government promises that such intrusion would be prevented. It was also charged that they directly incited disorder by selling whisky, arms, and ammunition to the Indians in return for stolen stock. In his official report on the outbreak, General Pope states emphatically that the unlawful intrusion and criminal conduct of the white hunters were the principal cause of the war (*War, 1*). This is confirmed by the testimony of white men employed at the Cheyenne agency at the time, who stated to the author that just before going out the Cheyenne chiefs rode down and assured them that they need have no fear, as the Indians considered them as friends and would not molest them, but were compelled to fight the buffalo hunters, who were destroying their means of subsistence. "Then they shook hands with us and rode off and began killing people."

Shortly before this the son and nephew of Lone-wolf, the principal chief of the Kiowa, had been killed in Mexico. He went down with a party in the summer of 1874 and buried their bodies, making a solemn vow at the same time to kill a white man in retaliation, and thus communicating to his people the bitterness which he felt himself (see the calendar, 1873-74). Lone-wolf is described by Battey about this time as being several years older than Kicking-bird, not so far seeing, more hasty and rash in his conclusions, as well as more treacherous and cunning, but with less depth of mind. He was the acknowledged leader of the war element in the tribe.

While lawless white men were thus destroying the buffalo, the Indians themselves were suffering for food. The agent for the Cheyenne

reports that for nearly four months preceding the outbreak the rations had fallen short, and expresses the opinion that if there had been a full supply he could have held the tribe from the warpath. At the same time they were being systematically robbed of their stock by organized bands of horse thieves. The immediate cause of the outbreak by the Cheyenne in May, 1874, was the stealing by these men of



Photo by Bell, 1888

FIG. 51—Gui-pägo or Lone-wolf, present head chief of the Kiowa

forty-three valuable ponies belonging to the chief, Little-robe. In attempting to recover them Little-robe's son was dangerously wounded, in revenge for which the Cheyenne soon after killed a member of a surveying party in the Kiowa country and at once began open hostilities (*Report*, 34; *Battey*, 4).

Agent Miles thus tersely sums up the provocation:

The lack of power to administer the law—to remove improper characters from this reservation, to break up the various bands of dissolute white men, horse and cattle thieves, known to be operating in our vicinity—is the prime cause that may be assigned for the serious outbreak among the Cheyennes on this reservation. As elsewhere stated, the Cheyennes and Arapahoes were assured by the President, on their recent visit to Washington, that improper white men and buffalo hunters should be kept from their country at all hazards, and they very naturally expected that some effort would be made to keep that promise; but they have looked in vain, and the Cheyennes, being the most restless of the two tribes, grew tired and endeavored to avenge their own wrongs. The result of such a proceeding could have but one ending, and that was to bring them into conflict with the general government (*Report*, 35).

THE COMANCHE MEDICINE-MAN

At this critical juncture a young medicine-man named Ī'sātaí arose among the Kwáhadi Comanche—the wildest and most intractable portion of the tribe—with claims of supernatural powers. He asserted his ability to cure all diseases and to restore the dead to life, and said that he had been taken up repeatedly into the home of the Father of the Indians, above the sun and far above the abode of the white man's God, and that there he had been given control of the elements, with power to send rain, wind, thunder, lightning, or drought upon the earth as he pleased. What was most to the purpose, he promised to protect all who should believe in him, as he could produce cartridges in unlimited quantities from his stomach for his friends, and could so influence the guns of the whites, and particularly of the soldiers, that they would not shoot Indians, even though the latter stood in front of the muzzles. It was the old story of the Indian medicine-man that has been familiar from the time of the Shawano prophet to the messiah of the ghost dance.

His words created great excitement among the Comanche, nearly all of whom believed him. Some of his deluded followers asserted that they had themselves seen him ascend into the sky and again descend to earth, and at another time had seen him produce from his stomach nearly a wagon load of cartridges. Finally he commanded the tribe to assemble in May, 1874, at the junction of Elk creek (*Donä'i P'a*, "Pecan river") with the North fork of Red river, to see the proofs of his mission and to hear his message to the people. So great an impression had his fame produced by this time that even the friendly chiefs attended, as well as the main body of the Cheyenne and a part of the Kiowa. This was a new departure for the Comanche, who, according to all authorities, had never before "made medicine" as a tribe (*Report*, 36; *Battey*, 5).

On assembling at the designated spot the Indians were harangued by the medicine-man, who told them that their god commanded them to avenge their murdered kindred. Accordingly a party was made up to go to Texas and kill the Tonkawa, who, as has been stated, were cannibals, for which reason, and for the additional one that they constantly

served as scouts against the other Indians, they were regarded with common hatred by all the tribes. Learning of the proposed expedition, Agent Haworth warned the commander of Fort Griffin, near which post the Tonkawa were located, who had them removed to the post for safety. This being reported to the confederate tribes by their spies, they changed their program and decided to go out on the plains and kill the buffalo hunters at Adobe Walls.

Finding that the whole purpose of the gathering was warlike, those who desired to avoid trouble determined to return to the agency, but found that such a move had been anticipated by the hostiles, who declared that they would prevent any return, even if they had to kill the ponies of the friendlies to do it. Notwithstanding, a number of the Comanche, chiefly of the Penātēka band, made the attempt and succeeded in getting away to the agency. The main body of the tribe, the warlike Kwáhadi, and all the Cheyenne, decided for war (*Report*, 37). A few of the Kiowa were also among them, but as yet only one chief, Woman-heart, had smoked the war-pipe with the Comanche and Cheyenne, the rest of the tribe being still near the agency (*Battey*, 6). During all the subsequent troubles the Apache remained quiet and peaceable in the friendly camp at Fort Sill.

APACHE AND ARAPAHO FRIENDLINESS

During the whole period of the outbreak the Arapaho also remained loyal and friendly, in accordance with their treaty pledges and their general character, although the Cheyenne, with whom they were confederated, were the most determined of the hostiles. As soon as it became manifest that trouble was at hand, the Arapaho came in to the agency of the two tribes at Darlington to warn the agent and his employés, and, as a proof of their friendship, furnished an Indian police force, who stood guard over the agency every night until all danger was past. The sole exception to their uniform friendly conduct was the assassination of an employé named Frank Hollowell (or Holloway), in July, 1874, by two young Arapaho, the principal of whom was afterward convicted of the crime and died in prison. This was the only hostile act committed at the Cheyenne and Arapaho agency during the outbreak (*Report*, 38).

FURTHER DEFIANCE

The hostile Comanche and Kiowa now began to steal stock from around the agency at Fort Sill, and in response to a message sent to their camp by the agent, defiantly replied that they would not return the stock now, but would keep it to make peace with when they came back in the fall. They added that they would not molest the agency further if not interfered with by the soldiers, but if the soldiers came upon them they intended to come in and kill anyone they met (*Battey*, 7).

One or two trifling encounters occurred in May between the troops and Indians, presumably Comanche and Kiowa, in western Texas, and



PHOTO BY LANNEY 1892

PHOTO ENG CO. N.Y.

QUANAH PARKER, PRINCIPAL CHIEF OF THE COMANCHE

others more serious in June farther north, in Indian Territory and the adjoining part of Kansas, the Indians concerned being probably chiefly Cheyenne.

BATTLE OF ADOBE WALLS

In the latter part of June, 1874, the confederated Comanche, Cheyenne, and Kiowa made a combined attack upon the buffalo hunters intrenched in the fort of the Adobe Walls, on South Canadian river, in the Texas panhandle. The engagement began about the 27th, and continued several days, the Indians attacking with desperate courage, urged on by their medicine-man, who had assured them that the bullets of the whites could not hurt them. The hunters, however, had a small field cannon, and with this, protected as they were by the solid walls of adobe, they finally compelled the Indians to withdraw with considerable loss. The medicine-man excused the result on the ground that his medicine was for guns and not for cannon. The combined force was led by Quanah, the present noted head chief of the Comanche, who informed the author that he had seven hundred warriors in the fight, but added sententiously, "No use Indians fight adobe." The result convinced him of the falsity of the claims of medicine-men, against whom he has ever since used his powerful influence in his tribe. Finding their position untenable without military protection, which was refused by the general commanding the department, the buffalo hunters soon afterward abandoned the fort. The location is known among the Kiowa as "The place where Quanah led his confederates" (see *Report*, 39; *War*, 2; *Record*, 2).

On July 3 a small wagon train in charge of Patrick Hennessey and three other men, loaded with supplies from Wichita, Kansas, for the Wichita agency at Anadarko, was attacked by Cheyenne on the trail where now stands the town of Hennessey, Oklahoma. The four white men were killed and scalped, the stores and mules taken, and the wagons burned. Hennessey was tortured by being tied to a wagon wheel and burned upon a pile of grain taken from his own wagon. This last deed was the work of some Osage who came up while the Cheyenne were still there, and who secured the larger share of the plunder. These same Osage were ostensibly friends of the whites, and had completely deceived their agent and missionary into the belief that they were doing all in their power to quiet the hostile tribes. The bodies of three of the men killed were buried by a neighboring ranchman, who had warned them of their danger only a few hours before, and unsuccessfully endeavored to persuade them to turn back. Hennessey's remains were buried two days later by a party under agent Miles (*Battey*, 8; *Report*, 40).

FRIENDLIES COLLECTED AT FORT SILL

By this time the Cheyenne agency at Darlington was closely surrounded by bands of hostiles. Arming a small force of employes, the agent proceeded north to Wichita, Kansas, for assistance, after send-

ing a courier through by night to Colonel Davidson at Fort Sill for temporary aid. That officer promptly sent a troop of cavalry, which, however, was intercepted at the Wichita agency (Anadarko), then threatened by the Kiowa and Comanche. In response to the appeals of Agent Miles, a sufficient force of cavalry and infantry was sent from Fort Leavenworth to protect the Darlington agency. As soon as it had appeared that war was inevitable, Whirlwind, head chief of the tribe, with his band of Cheyenne, had moved into the agency, where he remained steadfastly peaceable. White-shield also ranged himself on the side of peace, and consented to carry a message to the hostile camp, as a result of which Little-robe and a number of others broke away at night and came into the agency, being compelled to abandon their tipis and most of their household goods to effect their escape (*Report*, 41).

The Kiowa medicine dance, which was held usually in June, had been postponed on account of the absence of Lone-wolf, who had gone to Texas after the bodies of his son and nephew. On his return it was held at a point on the North fork of Red river (see the calendar, 1874), being attended in force by the Comanche and Cheyenne, who made a strong effort to engage the Kiowa in the war. The dance closed on the 3d of July, when a small minority, led by Lone-wolf and Swan, decided for war and joined the hostiles, but the majority, under Kicking-bird, declared for peace and came in to the agency at Fort Sill. Here the friendly Indians of the different tribes belonging to the agency—Kiowa, Comanche, and Apache—were directed to encamp together on Cache creek, where they were enrolled by order of Colonel Davidson, after which none were to be allowed to come in and join the camp of the friendlies without surrendering their arms and obtaining a guarantee from the agent that they were guiltless of hostile acts. Similar orders were carried out in regard to the Indians of the Wichita agency at Anadarko. The enrollment showed four-fifths of the Kiowa among the friendlies, although, as the agent remarks, doubtless some of them did not deserve the name. With some inconsistency, Lone-wolf sent a message declaring his desire for peace and asking permission to come in to the friendly camp; but, as he was considered the leader and one of the most guilty of the hostiles, his request was refused. In the meantime orders had been issued from the War Department, on July 21, authorizing the military to punish the hostiles wherever found, even to pursuing them upon their reservations. General Pope, commanding the department, at once set the troops in motion, and a vigorous campaign began from the north and south of the exposed territory.

FIGHT AT ANADARKO, THE WICHITA AGENCY

Late in August a band of Nokoni Comanche came into the camp of friendly Comanche at the Wichita agency (Anadarko), desiring to remain. Colonel Davidson, commanding at Fort Sill, went over with a

detachment of troops to receive their surrender. They agreed to give up their arms, and had already delivered a number of guns and pistols, when a question arose as to the bows and arrows, and a messenger was sent to the commanding officer to decide the matter. While the messenger was gone, the chief, Red-food, gave a whoop—whether as a battle signal or merely to call another chief, is a disputed point—and was immediately fired upon by the guard. Lone-wolf and his Kiowa were on the ground and at once opened fire on the troops. A general fight ensued (August 22), the excitement being intense, as it happened to be ration day and nearly all the Indians of the Wichita agency were present—Caddo, Wichita, Delaware, and Pawnee—as well as a large number of the Kiowa, Comanche, and Apache of the other agency. Runners hurried to all the camps with the news that the troops were killing the Indians; but, notwithstanding, the fighting was confined to the Kiowa and Comanche, who attacked the agency, burning the schoolhouse, sacking Shirley's trading store, burning several houses of the friendly Indians, killing at least four citizens, and wounding several soldiers. While some fled to places of safety, others kept up the attack until next day, when, failing in a final attempt to take and burn the agency, they withdrew. According to the statement of the Indians, they lost two men and one woman killed and a few wounded. A part of the Kiowa engaged had been enrolled at Fort Sill among the friendlies, but had gone without permission to the Wichita agency some days before. Some of the Comanche who fled at the time of the fight came in soon after and reported to Colonel Davidson, and, on being assured that no harm was intended them, returned with him to the friendly camp at Fort Sill. In regard to this encounter, the Comanche disclaimed any hostile intention at the start, and the fact that they had voluntarily come in and surrendered their guns would show that it was the result of a panic arising from a misunderstanding (see the calendar; also *Report*, 42; *Battey*, 9; *Record*, 3).

As showing the moral effect of a knowledge of the power of the white man, it is worthy of record that only one of the Kiowa delegates to Washington in 1872 joined the hostiles, that one, Lone-wolf, being avowedly incited to his course by a thirst for vengeance for his son (*Report*, 43). As a commentary on the treatment frequently accorded "friendlies" during an outbreak, it may also be noted that the enrolled Kiowa, Comanche, and Apache were located two miles from Fort Sill, where Texas horse thieves stole over nineteen hundred of their animals within a year, while they themselves were kept almost at starvation point by the contractor's failure to supply their rations. Notwithstanding these discouragements they continued loyal, and sent as many of their children to school as could be accommodated (*Battey*, 10).

After the fight at the Wichita agency most of the Kiowa and Comanche concerned fled to the Staked plain, where the hostiles made

their chief headquarters. Some others not already enrolled now came in and asked permission to join the friendly camp. Set-t'aiñte, Big-tree, Woman-heart, and Poor-buffalo (Pá-tádal, "Lean-buffalo-bull"), who had been enrolled at the beginning, but had gone without permission to the Washita and fled from there at the time of the fight, came in soon after to the Cheyenne agency at Darlington and surrendered with a large number of their people, saying that they were tired of war, but did not like Fort Sill. As it was believed that they had taken part in hostilities, they were not allowed again to resume their position as friendlies, but were sent back as prisoners of war to Fort Sill, where their arms and horses were taken from them and the men were imprisoned, the chiefs being put in irons. Soon afterward Set-t'aiñte was returned to the Texas penitentiary (*Report*, 44).

SET-T'AIÑTE

Set-t'aiñte, "White-bear," better known as Satanta, who was thus finally removed from the field of action, is one of the most prominent men in Kiowa history, being noted among the most daring and successful warriors of the tribe, while in authority he held the rank of second chief, standing next after Lone-wolf. He has already been mentioned as a leading chief in 1864. His eloquence and vigor of expression in his native language, a peculiarly forcible one, had gained for him the title of the "Orator of the Plains." Every line of his strongly marked features showed the character of the man—a brave, forceful, untamable savage (figure 45). The persistent efforts of the Kiowa to secure his release prove the estimation in which he was held by his tribe. He came early into prominence and was one of the signers of the treaty of 1867, his name being second on the list. His seizure by General Custer the next year, in order to compel the Kiowa to come into the reservation, and his subsequent release, have been narrated. His arrest in 1871 for being concerned in an attack upon a wagon train in Texas, the commutation of the death sentence, and his release by the state authorities in 1873, have also been noted in the proper place. He was still, however, considered as a hostage for the good conduct of his people, and subject to rearrest whenever they became troublesome. As was almost inevitable, he became involved in the outbreak of the succeeding year, although apparently more by accident than deliberate purpose, and on coming in to Cheyenne agency with others in the fall of 1874 he was again arrested and turned over to the military authorities and by them sent back to the state penitentiary at Huntsville, Texas, to serve out his life sentence (*Report*, 45). When informed by Horace P. Jones, the government interpreter at Fort Sill, that he was to be returned to prison, he expressed himself bitterly, claiming that he had kept his parole and that there were others far more guilty than he. What affected him most was the entire separation from his people. He was taken back to prison in November, 1874, and four years later, refusing to live longer in confinement, he committed suicide

by throwing himself from an upper story of the prison, October 11, 1878 (*Whatley letter*).

Set-t'aiñte, whose name among the Kiowa is still one to conjure by, first acquired his title of "Orator of the Plains" in connection with the events which led to the treaty of Medicine Lodge, in 1867. He was already sufficiently distinguished among his own people as a leader on the warpath. In May preceding the treaty he visited Fort Larned, and, confronting General Hancock, he denounced agent Leavenworth and complained of the aggressions of the white men in a fiery speech, which is described as a masterly effort, from its opening, when he called the sun to witness that he would "talk straight," to the close, when, looking around over the prairie, he said that it was large and good, and declared that he did not want it stained with blood.

A few months later he escorted General Harney and the commissioners from the post to the spot where the Indians were gathering for the treaty. In spite of stringent orders before starting, the soldiers and camp followers soon began an indiscriminate slaughter of the buffalo along the line of march. As described by a correspondent—

They recklessly shot down the buffalo, simply that they might boast of it. After cutting out their tongues, they left the carcasses where they fell. The reader will readily perceive that when the Indians complain at every council of the decrease of the buffalo, such wanton waste of good meat could not be a pleasing sight to the greatest chief on the American plains. Satanta, never backward in speech, resented in strong terms the shooting of his game on his own ground. Said he, while his eyes flashed and his lips curled with scorn: "Has the white man become a child, that he should recklessly kill and not eat? When the red men slay game, they do so that they may live and not starve." Sound logic! Only persons devoid of sense or honor could have been guilty of such conduct in the enemy's country, especially when the commissioners were endeavoring to conciliate them with presents and reconcile them to the propositions about to be propounded.

The protest had its effect, no more shooting was allowed, and those responsible for the outrage were placed under arrest.

On behalf of the confederate tribes, he made the leading speech in reply to the commissioners. It is thus given by the correspondent of the *New York Times*:

"You, the commissioners, have come from afar to listen to our grievances. My heart is glad and I shall hide nothing from you. I understood that you were coming down to see us. I moved away from those disposed for war, and I also came along to see you. The Kiowas and Comanches have not been fighting. We were away down south when we heard you were coming to see us. The Cheyennes are those who have been fighting with you. They did it in broad daylight so that all could see them. If I had been fighting I would have done it by day and not in the dark. Two years ago I made peace with Generals Harney, Sanborn, and Colonel Leavenworth at the mouth of the Little Arkansas. That peace I have never broken. When the grass was growing in the spring, a large body of soldiers came along on the Santa Fé road. I had not done anything and therefore I was not afraid. All the chiefs of the Kiowas, Comanches, and Arapahos are here to-day; they have come to listen to good words. We have been waiting here a long time to see you and are getting tired. All the land south of the Arkansas belongs to the Kiowas and Comanches, and I don't want to give away any of it. I love the land and the buffalo

and will not part with it. I want you to understand well what I say. Write it on paper. Let the Great Father see it, and let me hear what he has to say. I want you to understand also, that the Kiowas and Comanches don't want to fight, and have not been fighting since we made the treaty. I hear a great deal of good talk from the gentlemen whom the Great Father sends us, but they never do what they say. I don't want any of the medicine lodges [schools and churches] within the country. I want the children raised as I was. When I make peace, it is a long and lasting one—there is no end to it. We thank you for your presents. All the headmen and braves are happy. They will do what you want them, for they know you are doing the best you can. I and they will do our best also. When I look upon you, I know you are all big chiefs. While you are in this country we go to sleep happy and are not afraid. I have heard that you intend to settle us on a reservation near the mountains. I don't want to settle. I love to roam over the prairies. There I feel free and happy, but when we settle down we grow pale and die. I have laid aside my lance, bow, and shield, and yet I feel safe in your presence. I have told you the truth. I have no little lies hid about me, but I don't know how it is with the commissioners. Are they as clear as I am? A long time ago this land belonged to our fathers; but when I go up to the river I see camps of soldiers on its banks. These soldiers cut down my timber; they kill my buffalo; and when I see that, my heart feels like bursting; I feel sorry. I have spoken."

The above is a plain unvarnished statement of facts, such as no Indian on the plains could produce but Satanta. It must be remembered that in cunning or native diplomacy Satanta has no equal. In worth and influence Red Cloud is his rival; but in boldness, daring, and merciless cruelty Satanta is far superior, and yet there are some good points in this dusky chieftain which command admiration. If a white man does him an injury, he never forgives him; but if on the other hand the white man has done him a service, death can alone prevent him from paying the debt. The speech of Satanta caused the commissioners to look rather blank, and when he pictured in his usual graphic manner how he loved his land, his buffalo, and his traditions, there was a world of feeling in his tones, betraying his knowledge of the vast difference between the power of the aggressive pale face and his waning race. A certain dim foreboding of the Indian's fate swept across his mind, and in its passage lit his eyes up with a fierce light, and his voice rose to a pitch of frenzy as he exclaimed: "We don't want to settle—I love to roam over the prairie; there I am free and happy."

His farewell speech to the commissioners at the conclusion of the treaty is thus noted in the same newspaper:

On this occasion the old chief was accompanied by one hundred of the principal warriors of the Kiowa tribe; and immediately after its close, this tribe, as well as the Comanches, struck camp and left for the Cimarron River in the south. He spoke with a gravity and earnestness that added force to his words. "If," said he, "the treaty bring prosperity to us, we of course will like it the better. If it bring prosperity or adversity, we will not abandon it." He alluded delicately to the fact that the white man often forgot to keep his treaties with the Indian; and then at the close, referring to the treaty just made, he rose to the heights of friendship, offering his heart and his hospitality, and adding: "For your sakes, the green grass shall not be stained with the blood of the whites. Your people shall again be our people, and peace shall be our mutual heritage. Good-bye. You may not see me again. But remember Satanta as the white man's friend." He is spoken of as having a very grave yet musical voice, and at times displays the deepest emotion.

Another who heard him on this occasion says:

The great chief, Satanta, in delivering his address spoke with a dignity and force that could not but be appreciated. He is a great orator and of unbounded influence in the council (*Ind. Miscel.*, xii, 3804-3833).



INSIDE OF SET-T'AIÑTE'S SHIELD

He is thus described by Keim in 1870:

For several years Satanta has filled the office of head chief. A peculiar dash of manner; a grin equal to all occasions; a remarkable shrewdness exhibited in managing affairs between the different tribes with which his people come in contact, or their intercourse with the national government, have won for him a prestige which he has very well maintained. Satanta, when I first met him, was a man of about fifty years of age. He rose first through prowess on the warpath, and afterward through skill in council and diplomacy. He had an intelligent face, and was large in frame and of muscular development, exhibiting also a tendency to obesity. Lately Satanta has found a threatening rival in Lone-wolf, the war chief of the tribe (*Keim, 3*).

Three years later we get the following notice from one who saw him with Big-tree, in 1873, while serving his first incarceration in the Texas penitentiary:

In the corridor of the penitentiary I saw a tall, finely-formed man, with bronzed complexion, and long, flowing, brown hair, a man princely in carriage, on whom even the prison garb seemed elegant, and was told that it was Satanta, the chief of the Kiowas, who with his brother chief, Big-tree, is held to account for murder. I was presently introduced to a venerable bigamist who was Satanta's chosen boon companion, on account of his smattering of Spanish, and through this anxious prisoner was presented at court. Satanta had come into the workroom, where he was popularly supposed to labor, but where he never performed a stroke of work, and had seated himself on a pile of oakum, with his hands folded across his massive chest [figure 150]. His fellow prisoner explained to Satanta, in Spanish, that we desired to converse with him, whereupon he rose and suddenly stretching out his hand gave mine a ponderous grasp, saying: "How!" He then responded, always through the aged wife-deceiver, to the few trivial questions I asked, and sat down, motioning to me to be seated with as much dignity and grace as though he were a monarch receiving a foreign ambassador. His face was good; there was a delicate curve of pain at the lips, which contrasted oddly with the strong Indian cast of his other features. Although he is much more than 60 years old, he hardly seemed 40, so erect, elastic, vigorous was he. When asked if he ever expected liberation, and what he would do if it should come, he responded, "Quien sabe?" with the most stoical indifference. Big-tree was briskly at work plaiting a chair seat in another apartment and chewing tobacco vigorously. His face was clear cut and handsome, his coal black hair swept his shoulders, and he only paused to brush it back and give us a swift glance as we entered, then briskly plaited as before (*Scribner, 1*).

The particular offense for which Set-t'aiñte was first arrested was a raid upon some teamsters on Salt creek, Jack county, Texas. In response to a letter of inquiry, the following concise statement in regard to his prison life and tragic death was obtained from Mr L. A. Whatley, superintendent of Texas penitentiaries, writing from Huntsville, under date of March 3, 1896:

At the July term of the district court of Jack county, in the year 1871, Satanta was convicted of murder and sentenced to life imprisonment in the Texas state penitentiary. He was received at the Huntsville prison on the 2d of November, 1871. Upon the recommendation of President U. S. Grant, Governor E. J. Davis, on August 19, 1873, set Satanta at liberty upon parole, i. e., conditioned upon his good behavior. It seems, however, that he violated his parole, for he was arrested and recommitted to the prison at Huntsville by Lieutenant General Sheridan on the 8th of November, 1874. On October 11, 1878, Satanta committed suicide by throwing himself from the

second story of the prison hospital, from the effects of which he died within a few hours. He was buried at the prison cemetery, where his grave can be identified to this day. During the period of his incarceration in this prison Satanta behaved well, but was very reticent and stoical.

Such was the end of the man who had said: "When I roam over the prairie I feel free and happy, but when I sit down I grow pale and die."

Set-t'aiñte was distinguished by his war paint, which was red, his face, hair, and the upper part of his body being painted red, his tipi also being painted entirely red, with streamers of the same color at the ends of the poles. He carried a ceremonial "medicine lance," feathered like an arrowshaft, which seems to have been an ancient heirloom from the Crows. He had a grim sort of humor, rather characteristic of his tribe. At a council held at Fort Dodge in the spring of 1867 he was presented by General Hancock with a full suit of general's uniform, and showed his appreciation of the gift by leading an attack on the post shortly afterward arrayed in his new toggery (*Custer*, 2). This attack was probably in fulfillment of a promise made a few months before, when it is said he sent a message to the commander of the post saying that his stock was getting poor—this was in winter—and he hoped the government animals at the post would be well fed, as he would be over in a short time to get them (*Report*, 46). He left a son, who inherited his father's name and shield, as well as his bold hawk-like features. This is the young man mentioned by Custer in his "Life on the Plains." He enlisted in the Indian troop at Fort Sill, and on his death in 1894 made a formal will, giving his father's shield to Captain H. L. Scott, of the Seventh cavalry, commander of the troop, in whose possession it now is. The representation here given (plates LXII, LXIII) is made by his permission. A sister of the elder Set-t'aiñte still lives, and, with a friendly, hospitable disposition, seems to combine many of her brother's strong traits of character. Since the death of the younger Set-t'aiñte the name is tabooed, in accordance with tribal custom, and the chief is referred to only under his boy name of Gúatoñ-bain, "Big-ribs."

PROGRESS OF THE CAMPAIGN

The campaign against the hostiles was now pressed vigorously. A large force of troops under Colonel (now Major-General) Nelson A. Miles started from Fort Supply toward the southwest to strike the enemy in the direction of the Antelope hills, while a smaller body from New Mexico, under Major W. R. Price, moved down the South Canadian to assist him. On August 30 Miles encountered the Indians in force near the head of the Washita, and after a running fight, lasting several days, drove them out on the Staked plain, with a loss of several killed, besides a considerable portion of their horses and camp outfit. A few days later the supply train in charge of Captain Wyllis Lyman, Fifth infantry, was attacked near the head of the Washita. The men corralled the wagons, and defended themselves for several days until relief arrived from Fort Supply. On September 12 the detachment under



OUTSIDE OF SET-T'AIÑTE'S SHIELD

Major Price had a severe encounter with a large force of Indians between Sweetwater creek and the Washita, on the eastern boundary of the Panhandle, but finally repulsed them, pursuing them several miles. The assailants were supposed to have been the Kiowa who had recently stampeded from the Wichita agency (see the calendar 1874-75; also *Record*, 4; *War*, 3).

On September 26 and 27, 1874, Colonel (afterward General) Ranald S. Mackenzie, Fourth cavalry (*Mángomhénte*, "No index-finger," on account of the loss of that finger), whom the Comanche already knew to their sorrow, with a detachment of his regiment, after repelling two attacks, surprised a large body of Cheyenne and their allies in a canyon near Red river, Texas, destroying over a hundred tipis and capturing their entire camp outfit, with over fourteen hundred horses and mules. This was the severest blow the Indians had yet received. On October 9, Colonel George P. Buell, Eleventh infantry, struck and destroyed a large Kiowa camp on the Salt fork of Red river, and eight days later Captain Adna R. Chaffee, Sixth cavalry, surprised and destroyed another camp north of the Washita, the Indians fleeing without attempting a defense (*Record*, 5).

As a result of these successive losses the Indians became discouraged, and early in October the Comanche sent messengers asking permission to come into the agency. Permission being given, Tabinä'naka, White-wolf, and Red-food, with their people, started in and were met on Elk creek by a detachment from Fort Sill, under Major G. W. Schofield, who received their surrender and brought them in to the fort. Others came in a few days later and surrendered, making in all about four hundred Indians with about two thousand horses. Other Comanche and Kiowa in small parties continued to come in, the men being imprisoned under guard as fast as they arrived. Big-bow was allowed to go back to induce the Kiowa to come in, and was successful, returning in February, 1875, with Lone-wolf, Red-otter (*Apeñ-gúădal*), Swan (*Tsü'dal-t'aiñ*), Dohásän, and Poor-buffalo, and their people, who were met on their way in by the interpreter, Philip McCusker, and some friendly Comanche, to whom they surrendered their arms and horses. Poor-buffalo and his band had been enrolled among the friendlies, but had fled at the time of the agency fight. This left only a few of the Kiowa out, and these also came in soon after. In the meantime small bodies of Cheyenne were coming in and surrendering at their agency, but the main body still remained out (*Report*, 47; *Record*, 6).

On November 6 a small detachment of the Eighth cavalry under Lieutenant H. J. Farnsworth had a fight with about a hundred of the Cheyenne on McClellan creek, Texas, in which several were killed and wounded on both sides. Two days later Lieutenant Frank D. Baldwin, with some of the Fifth infantry and Sixth cavalry, attacked a camp of Cheyenne near the same place and rescued two little white girls named Germaine, who had been captured more than a year before. The pursuit was continued by another detachment under Captain Charles D.

Viele, Tenth cavalry. On November 28 Captain Charles A. Hartwell, Eighth cavalry, again encountered and defeated the Cheyenne on Muster creek, Texas. Several other skirmishes occurred during the month, in each of which the Indians—chiefly Cheyenne—were the losers, and on the 28th of December Captain A. B. Keyes, of the Tenth cavalry, succeeded in capturing, on the North Canadian, an entire band of that tribe, with all their ponies, after having followed them 80 miles. Most of the operations during October and November were by troops from Fort Sill under command of Lieutenant-Colonel John W. Davidson, Tenth cavalry, commanding officer of the post (*Record*, 7).

SURRENDER OF THE CHEYENNE

The campaign was vigorously prosecuted during the winter and into the spring of 1875. The forces engaged consisted of eight troops of the Sixth cavalry under Majors Charles E. Compton and James Biddle, four troops of the Eighth cavalry under Major Price, and four companies of the Fifth infantry, the whole under the immediate command of Colonel (now Major-General) Nelson A. Miles. During this period the troops were constantly engaged in scouting over the territory involved, keeping the Indians so constantly on the move that they were unable to lay in any stock of provisions. This active work was continued by the troops upon the exposed and barren plains of that region during a winter of unprecedented severity, and as the season advanced, the difficulty of supplying the necessary forage and subsistence increased so that no little hardship and privation resulted, but the troops bore everything with fortitude and without complaint. By extraordinary effort enough supplies reached the troops to enable them to remain in the field until their work was done, and at length, early in March, 1875, the southern Cheyennes, completely broken down, gave up the contest, and under their principal chief, Stone-calf, the whole body of that tribe, with a trifling exception, surrendered themselves as prisoners of war. At the same time they restored the two elder captive Germaine girls. They gave up also their horses, bows and arrows, with some guns, but secretly hid most of their valuable firearms (*Record*, 8).

The main body of the Cheyenne surrendered to Lieutenant-Colonel Thomas H. Neil, Sixth cavalry, near the agency (Darlington), on March 6, 1875, and were at once disarmed and placed under guard, their ponies being confiscated and sold. Their agent says:

A more wretched and poverty-stricken community than these people presented after they were placed in the prison camp it would be difficult to imagine. Bereft of lodges and the most ordinary cooking apparatus; with no ponies nor other means of transportation for food or water; half starved and with scarcely anything that could be called clothing, they were truly objects of pity; and for the first time the Cheyenne seemed to realize the power of the government and their own inability to cope successfully therewith (*Report*, 48).

On the 27th of April they were formally transferred from the charge of the military to that of the agent and declared to be again at peace

with the government. Throughout this whole period the Arapaho camped near the agency, in spite of short rations and all the other difficulties of their position, had maintained untarnished their treaty obligations.

PRISONERS SENT TO FLORIDA

It had been determined, on the surrender of the hostiles, to select some of the most prominent leaders from each tribe concerned for a term of confinement at some military prison in the east. Accordingly thirty-three of the Cheyenne were selected, with two Arapaho, who, though not concerned in the outbreak, had been guilty in other ways. Among the Cheyenne selected was one woman, who was identified as having participated in the murder of the Germaine family. While ironing the prisoners on April 6, a young warrior named Black-horse, stung by the taunts of the women, kicked over the blacksmith and attempted to escape, but was immediately shot down by the guard. The Cheyenne at once attacked the guard with guns and arrows. A troop of cavalry was quickly ordered up from Fort Reno, 2 miles away, when the Cheyenne fled to the sandhills on the river bank across from the agency, where they had secreted a quantity of firearms and ammunition, and, digging pits in the sand, opened fire on the troops. A severe engagement ensued, the Indians holding their position until dark, several being killed or wounded on each side. During the night they fled, and when daylight came nothing remained of the prison camp but a few worn-out tipis. Most of the Indians soon afterward surrendered; but a band of about sixty, including the murderers of the Germaine family, attempted to escape to the Dakota country, and had made their way to the vicinity of Fort Wallace, Kansas, when they were intercepted by a detachment under Lieutenant A. Henley, Sixth cavalry, who cut off about half of them from the rest. On their refusal to surrender, he attacked them and killed nineteen, captured over one hundred and twenty-five ponies, and burned their camp, with the loss of two soldiers killed. The remainder escaped to the northward. The thirty-five Cheyenne and Arapaho prisoners selected for imprisonment were sent to Fort Marion, near St Augustine, Florida (*Record*, 9; *Report*, 49).

THE GERMAINE FAMILY

The Germaine girls referred to were part of a family of that name who had been attacked by the Cheyenne at their home on Smoky Hill river, Kansas, on September 13, 1874. The father, mother, brother, and one sister were killed, and four other sisters carried off, two of whom were young women. On November 8, 1874, the two little girls, aged five and seven, were rescued by Lieutenant Baldwin, as already noted, in an encounter on the edge of the Panhandle. The two elder sisters were held until the Cheyenne under Stone-calf surrendered, after having been prisoners nearly seven months, during which time they had suffered all the horrors of Indian captivity. General Miles

became the guardian of all four, a comfortable home was provided for them at Fort Leavenworth, and Congress authorized the stoppage of an amount sufficient for the support of the children from the annuities of their captors, the southern Cheyenne. A woman identified by them as having taken part in the murder was sent with the other prisoners to Florida (*Record*, 10; *Report*, 50).

Atrocities were, however, not confined to one side. In April, 1875, a party of Texans attacked six Comanche, killing four men and a woman, only one man escaping. The dead Indians, including the woman, were beheaded, and the heads carried to the nearest town, where they were said to have been preserved in alcohol (*Report*, 51).

SURRENDER OF THE COMANCHE

In response to overtures made through scouts Stilwell and Kilmartin, another party of Comanche, numbering nearly two hundred, partly Kwáhadi, came into Fort Sill in April and surrendered to Colonel (General) R. S. Mackenzie, who had succeeded Colonel Davidson in command of the post, delivering up their arms and over seven hundred horses and mules. Soon afterward Mackenzie sent another message to the Kwáhadi Comanche, Quanah's band, through Dr J. J. Sturm, an experienced frontiersman. He found them near the head of Red river and succeeded in persuading them to return with him to Fort Sill, where they arrived on June 2, 1875, and surrendered their arms and over fifteen hundred head of stock. The band numbered over four hundred, including a few Apache. These were practically the last of the hostiles, and thus the outbreak came to a close about a year after it had begun. Although the Indians had become impoverished by loss of stock and camp equipage, their loss in killed was very small. Only about twenty were captured, the remainder having surrendered voluntarily (*Report*, 52).

About thirty-five hundred horses and mules had been surrendered by the Kiowa and Comanche when they came in. Of these nearly eight hundred were shot, one hundred were given to the Tonkawa scouts, several hundred more were given to the military scouts or were stolen, some were returned to their owners, and about sixteen hundred were sold for the benefit of the Indians, realizing about \$22,000, which Colonel Mackenzie decided to invest in sheep and goats, with the intention of converting them into pastoral tribes like the Navaho (see the calendar, 1875-76). The first horses surrendered had been shot before this economic idea occurred to anyone. In addition to their losses by the surrender, about two thousand horses and mules had been stolen by Texas horse thieves from the friendly Indians camped near the agency (*Report*, 53).

PROPOSITION TO DEPORT HOSTILE TRIBES

As a means of rendering the late hostiles forever harmless, and compelling them to give up their nomadic hunting life and settle down to earn their own living, it was proposed to deport several thousands of

them, practically about all of the Cheyenne, Comanche, and Kiowa tribes, to a remote district, where they were to be disarmed, dismounted, and compelled to work in return for the supplies to be furnished by the government. Congress having appropriated funds for the purpose, arrangements were made with the Quapaw in April, 1875, by special agent Major C. F. Larrabee for the purchase of a portion of their reservation in the northeastern corner of Indian Territory. Preparations were commenced for their removal, but in consequence of an adverse report made by the commissioner appointed to remove them, the plan was abandoned (*Report*, 54).

As had been done in the case of the Cheyenne and Arapaho, a number of the Kiowa and Comanche were selected from among the late hostiles and sent about the first of May, 1875, to join their predecessors in military confinement at Fort Marion, Florida. It is somewhat of a coincidence that the exiled Apache of Geronimo's band who were removed from Arizona as prisoners of war in 1886 to the same Fort Marion are now located at Fort Sill, upon the Kiowa reservation, to which point they were brought, in September, 1894, after a temporary sojourn at Mount Vernon Barracks, Alabama. Nine Comanche and twenty-six Kiowa were selected, making, with the Cheyenne and Arapaho, a total of seventy prisoners sent to Florida. Of the Kiowa the most prominent were Lone-wolf, Swan, Woman-heart, and White-horse, the last named being selected on account of his previous record as a notorious raider, although he had been enrolled with the friendlies during the outbreak (*Report*, 55). It was of course the intention to select for punishment those who had been most conspicuous or guilty in the outbreak, but the selection being left principally to Kicking-bird, that chief, with a natural desire to shield his friends, picked out only a few of the prominent leaders, making up the quota with Mexican captives and young men of no great reputation. Following is the list of Florida prisoners from the Kiowa tribe, as furnished by the Indians:

1. *Gui-pägo*, "Lone-wolf," head chief and adopted father of the present head chief of the same name.
2. *Mäñyí-ten*, "Woman-heart," a chief and signer of the Medicine Lodge treaty.
3. *Tseñ-t'aiñte*, "White-horse," a chief.
4. *T'ené'taide*, "Bird-chief," a chief.
5. *Tsädal-t'aiñ*, "White-goose," i. e. "Swan," a chief.
6. *Paä'ti*, "Buffalo-bull's-entrails," a chief.
7. *Mamä'nte*, "Walking-above," alias *Dahä'ti*, "Medicine-man," a chief and noted medicine man—died in Florida.
8. *Gui-bótte*, "Wolf-stomach"—died in Florida.
9. *É'pea*, "We-(they)-are-afraid-of-him"—died in Florida.
10. *Gobe*, "Wild-horse."
11. *Zon-k'ía*, "Tooth-man," alias *Kíñasáhe-k'ía*, "Green-shield-man"—died in Florida.(?)
12. *Etälyidónmo*, "He-(they?)-hunts-for-boys."
13. *Máñ-kopédal*, "Flat-nose"—dead.
14. *Set-mänte*, "Bear-above," or "Sky-bear"—dead.
15. *T'enépiabi*, "Humming-bird"—still living; now a policeman.
16. *Woháte*, "Cow" (*jargon*)—still living.

17. *Pä'da-i*, "Twin"—still living.
18. ——— ("Double-vision"—Report, 56).
19. *P'ódal-á'dalte*, "Snake-head," alias *Zoñtam*, "Hole-bite" (Paul Zotom)—still living.
20. *Set-k'opte*, "Mountain-bear" (Paul Saitkopeta)—still living.
21. *Belo* (i. e., *Pedro*)—a Carrizo Indian captive from Mexico, still living.
22. *Bíako* (Viejo?)—a Mexican captive, still living.
23. *Päli* (Valdez?)—a Mexican captive, still living.
24. *Añgáite*, "Ankle"—a Mexican captive, still living.
25. *Bóloi*—a Mexican captive, still living.
26. *Goho*, "Kick"—a Mexican captive, still living.

It is notable, as showing the comparative vitality of the races under new conditions, that of the twenty Indians on the list only five are still alive, and one of these is dying of slow consumption, while all of the six Mexican captives are still in vigorous health. Of the twenty Kiowa and Comanche who signed the treaty of 1867 only two were alive in 1896.

The prisoners while in Florida were merely kept under surveillance and were not subjected to close confinement. Philanthropic white people took an interest in them, especially in the younger ones, and undertook to give them rudimentary instruction in civilization and Christianity. When they were finally released in May, 1878, a number of the young men consented to remain a few years longer in the east to acquire an education, among whom were eight of the Kiowa. Those who were not taken into private families were placed in the Normal Institute at Hampton, Virginia, originally established for the education of negroes. Soon after, fifty other young Indians were assembled at Hampton, which thus became also an Indian school. The success of this experiment led to the establishment of the Indian school at Carlisle, Pennsylvania, in 1879 (*Report*, 57).

Several of the young Kiowa were received in refined and philanthropic families in the north, with the purpose of educating them to be missionaries among their people on their return. One of these, Paul Zotom (*Zoñtam*), was regularly ordained as a deacon in the Episcopal church (*Report*, 58). He returned in the summer of 1881, but has sadly fallen from grace. Another, Paul Saitkopeta (*Setk'opte*), after similar careful training in a refined family with the same purpose in view, returned a year later nearly dead from consumption contracted in the east, and although of more manly character than Zotom is now almost helpless for any practical purpose, being a confirmed invalid, and has reverted to many of the Indian customs. *Setk'opte* is a Kiowa by adoption only, being the son of a Cheyenne chief by a Pawnee captive woman.

KICKING-BIRD

The noted chief, *T'ené-angópte*, "Kicking-bird," who had been so long a leader of the peace element among his people, died suddenly on May 5, 1875. It was suspected at the time, and is still believed by some of the tribe, that he had been poisoned by his enemies of the war party, but although the matter was investigated it could not be proven.

Like so many others of the Kiowa, he was of mixed origin, his paternal grandfather having been a Crow captive taken when a boy and adopted into the tribe. Although a young man, he had a commanding influence among his people, and on the failure of the war party under Lone-wolf became recognized as the principal chief of the Kiowa. An untaught savage, he was yet a man of fine native ability and thoroughly versed in the traditions and ceremonials of his people. Recognizing early the inevitable changes consequent upon the advent of the white man, he deliberately abandoned the warpath and addressed himself to the task of preparing his people to meet the new conditions. From that time forward his voice and example were always on the side of peace and civilization. By this course he drew upon himself the hatred of the conservatives and the war party, who denounced him as a coward and a traitor, charges which he met and refuted in characteristic fashion. When the question of peace or war came to a final issue in 1874, his powerful influence held more than two-thirds of the Kiowa from the warpath, and by his exertions afterward he secured the best possible terms for the defeated hostiles. It was by his invitation and assistance that Battey organized the first school in the tribe in 1873. His last counsel to his people was to remain at peace with everybody and to follow the advice of their teachers, and he declared that he was dying "holding on to the white man's hand." At the request of his family, Agent Haworth took charge of his body and gave it Christian burial, this being the first instance of the kind in the history of the tribe (*Report*, 59; *Battey*, 11).

His long-continued attachment to the whites at one time so far brought him into disrepute with his tribe that they charged his friendship to cowardice, called him a woman, and refused to listen to his counsels. Finding his influence in the tribe nearly gone, he raised a force, conducted a raid into Texas, and had a severe engagement with the white soldiers, where he led his men with such ability and coolness as to come off victorious and win a testimony of respect from the commander of his enemy's forces. On his return home he again advocated peace with the whites, and has steadily continued to do so from that time to the present. The tribe, thoroughly convinced of his bravery, no longer attribute his desire for peace to cowardice, and listen to his eloquent arguments, in most cases yielding to his counsels; so that he really stands at the head of all those Kiowa who are disposed to live peaceably, as Lone-wolf does at the head of those occupying a less friendly position (*Battey*, 12).

Another characteristic incident is recorded by Battey. Shortly before the outbreak some trouble occurred between Kicking-bird and the chiefs disposed to hostility, who accused him of having lied about them. A meeting was arranged at the agency to talk it over, and as the Indians were greatly excited some trouble was anticipated. When the Kiowa began to arrive, each as he entered the office and seated himself strung his bow and placed it where it could be instantly seized for action, put his quiver of arrows in convenient position, also placing three or four arrows across his lap, loosened his revolver, and turned the handle ready for grasping, while many of them trembled with excitement. When the room was nearly filled, Kicking-bird, accom-

panied only by his brother and another friend, rode up coolly, as if unaware of what might be going on inside. Securing their ponies, they entered the office, Kicking-bird in advance. Looking around the circle, he took in the situation at once, and seating themselves, he and his companions coolly proceeded to place their bows, arrows, and revolvers in the same position for convenient use if necessary. Then addressing the agent, Kicking-bird informed him of the charges against himself (Kicking-bird), and called upon him to keep back nothing that he had told him, but to tell his people his whole talk (*Battey, 13*).

CHANGED CONDITIONS

With the close of the outbreak and the subsequent readjustment of affairs came a great change in the condition of the Kiowa and their confederated tribes. The old chiefs who had so often led them on the warpath were dead or in prison; their horses, which to prairie warriors were almost as essential as the bow or rifle, had been taken from them, together with their weapons; military posts and garrisons had been established in their midst and the chain of white settlements had been drawn closer around them; their old allies, the Cheyenne, had been rendered powerless to help them, and, more than all, their unfailing commissary, the buffalo, had practically disappeared. They felt that they were powerless in the hands of the stronger race, and with a deep sigh of regret for their vanished sovereignty they literally put their hands to the plow and endeavored in their weak fashion to follow the white man's road. The warriors, realizing that their time was too short to learn new ways, were anxious to see their children prepared to meet the changed conditions, and in consequence the schools were soon crowded, some of the chiefs even assisting the teachers in the work of organizing. Henceforth we find them trying to follow the new path with patient resignation, in spite of difficulties and frequent neglect, with only occasional weak ebullitions of the old fighting temper when aroused by some particularly aggravated grievance.

EPIDEMICS OF MEASLES AND FEVER IN 1877—FIRST HOUSES BUILT

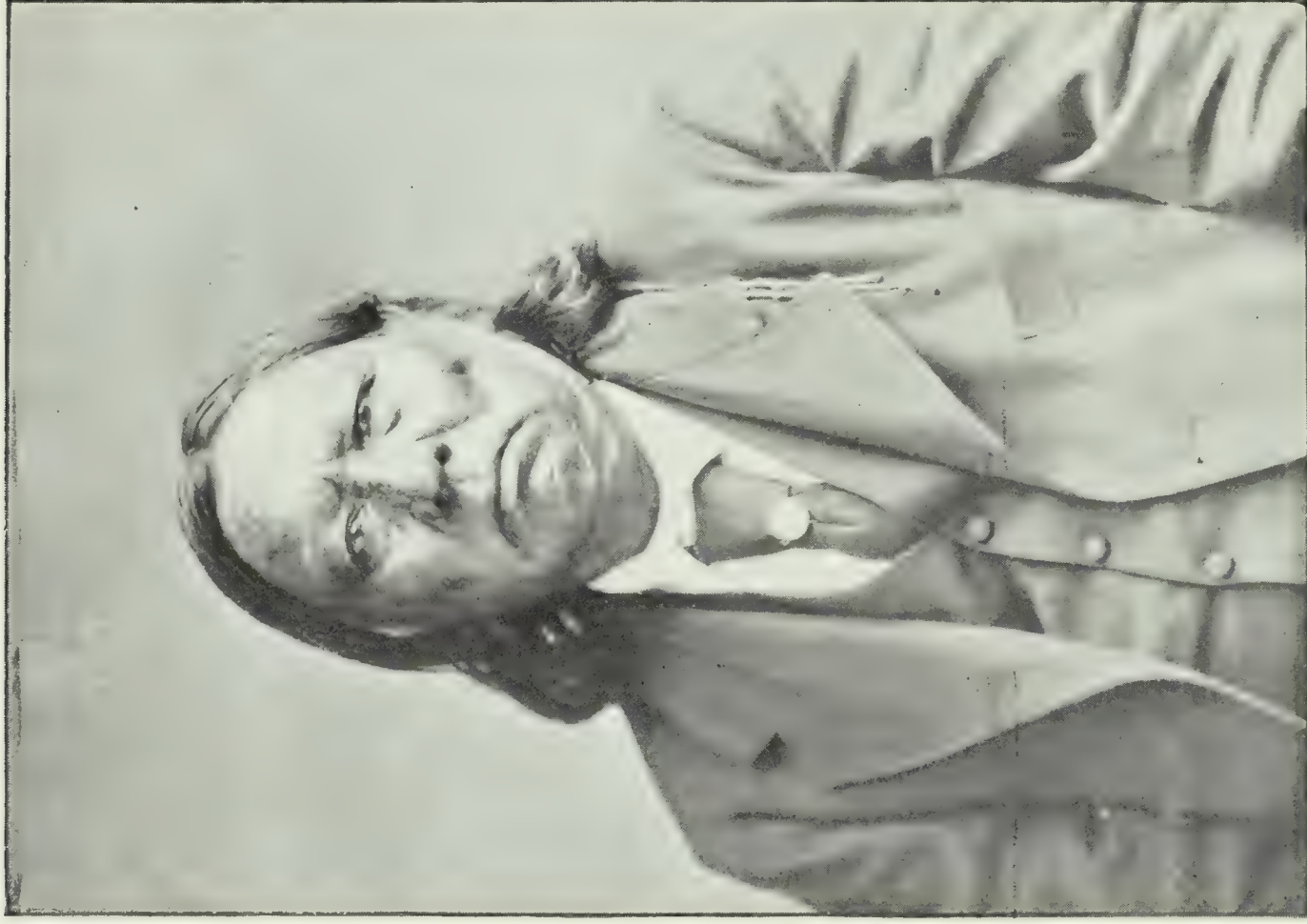
In 1877 an epidemic of measles in the tribe carried off a large number of children. It was followed immediately afterward by an outbreak of fever. In the fall of the same year the government, through agent Haworth, built a number of houses for the prominent chiefs, these being the first Indian houses on the reservation (see the calendar). In accordance with a new plan of employing Indians at agencies, a police force of about thirty natives was organized in 1878. The result in this as in all other cases has been eminently satisfactory (*Report, 60*).

AGENCY REMOVED TO ANADARKO—THE LAST OF THE BUFFALO

For years Indians and agents alike had complained of the location of the agency at Fort Sill. In consequence of repeated representa-



PHOTO BY SOULE, ABOUT 1870



PHOTOS BY JACKSON, 1872



SET-ĩMK'IA OR STUMBLING-BEAR (PUSHING-BEAR)

tions of the matter, it was removed toward the close of 1879 to Anadarko on the Washita and consolidated with the Wichita agency at that point, where it still remains (*Report*, 61). As a result, the Kiowa, who had previously been together in a single camp on Cache creek below the fort, now began to scatter and take up individual farms along the Washita and on the creeks north of Mount Scott. This year may be taken as the date of the disappearance of the buffalo from the Kiowa country, the Indians during the summer of 1879 being reduced to the necessity of killing and eating their ponies to keep from starving, in consequence of the almost total failure of their annual hunt (see the calendar). Thereafter the appearance of even a single buffalo was a rare event.

In the same year died Lone-wolf, the principal chief and leader of the war element in the late outbreak. Dohásän, Set-ängya, and Set-t'aiñte being already gone, his death may be said to mark the end of the war history of the Kiowa. Shortly after his return from Florida he had conferred his name and succession upon the present bearer of the name, who had been the comrade of his son, killed in Texas, although not related by blood. The succession is now disputed by Ä'piatañ, the nephew of the first Lone-wolf.

THREATENED OUTBREAK INSTIGATED BY DÁTEKÂÑ

In June of 1881 there was considerable excitement caused by threats of an outbreak by the Kiowa on account of dissatisfaction with the rations. Their attitude became so threatening that the more peaceable Wichita and associated tribes became alarmed, and troops were sent from Fort Sill to prevent trouble, which had the effect of quieting the unrest (*Report*, 62). It is possible that the Kiowa were instigated to this course by Dátekâñ, who soon afterward began preaching the return of the buffalo and the old Indian life (see the calendar, 1882).

EPIDEMIC OF 1882—BEGINNING OF CHURCH WORK

In the fall of 1882 the tribe suffered from an epidemic of whooping cough and measles (*Report*, 63). In 1883 the first church was built at the agency by Reverend J. B. Wicks of the Episcopal church, who had been conducting missionary work among the associated tribes for about two years previously. It was built and supported, however, by the Wichita and affiliated tribes, the Kiowa and Apache as yet taking little interest in such matters (*Report*, 64). The work was abandoned shortly after and not resumed until 1887, when the Methodists entered the field, followed later by the Presbyterians, Baptists, and Catholics.

LEASING OF GRASS LANDS

For some time various agents had called attention to the fact that the Indians had a large surplus of valuable grass lands, which might be made to yield them a considerable income if leased to cattlemen.

The suggestion being approved by the department, an arrangement was made with several large cattle firms. The first money payment to the Indians under this agreement was made in the summer of 1885, but only to the Comanche, as the Kiowa and Apache for a year longer refused to accept the money, believing this to be a scheme to deprive them of their lands. There is no official notice of this at the time, for the reason that the arrangement was at first only a matter of tolerance and mutual agreement between the Indians and cattlemen, without formal official recognition or responsibility for several years afterward.

PÁ-IÑGYA, THE MEDICINE-MAN AND PROPHET

In the spring of 1887 a prophet named Pá-iñgya, "In-the-middle," revived the doctrine which had been taught five years before by Dáte-kâñ of the speedy return of the buffalo and the revival of the old Indian life, adding the usual accompaniments of invulnerability for his followers and the destruction of the whites and unbelieving Indians by fire and whirlwind. He claimed also the power to resurrect the dead and to destroy his enemies with a glance as by a lightning stroke. His preaching aroused great excitement among the Kiowa, and nearly the entire tribe was soon enrolled among his adherents, including every prominent chief except Stumbling-bear and Sun-boy. He established headquarters on Elk creek, at the extreme western end of the reservation, to which all his followers repaired. Here, by the friction of a stick upon a block of wood, he kindled a sacred fire, from which the devotees took brands to light and warm their tipis, being commanded to throw away the white man's matches or flint and steel, together with the white man's dress and weapons. As the day appointed for the final cataclysm approached, the Indians took their children from the schools at the agency in order that they might escape the destruction which was soon to overwhelm the intrusive race, and left in a body for the rendezvous on Elk creek. The movement alarmed the whites, who saw that there was trouble brewing, but could get no explanation of the reason. In anticipation of an outbreak, the agent, Captain Hall, summoned the troops to his assistance. With a small escort he visited the prophet's camp, and through the medium of Stumbling-bear invited the chiefs to a conference, with the result that the Kiowa agreed to return to their homes and await developments. As the time came and went without supernatural event, they became satisfied that the prophecy was a delusion, and the excitement died out. Pá-iñgya still lives, and when the messiah revelation spread among the southern tribes a few years later he hailed it as the delayed fulfillment of his own prophecy (see the calendar).

INDIAN COURT ESTABLISHED

As a practical step toward educating the Indians in civilized forms of self-government and to save the time consumed by the agent and



PHOTOS BY JACKSON, 1872



PAÍ-TÄLYÍ OR SUN-BOY

other officials in trivial concerns, an Indian court consisting of three judges was organized upon the reservation in 1888 for the trial of minor offenses and questions, the first judges appointed being Quannah, Lone-wolf, and Tawákoni Jim, head chiefs respectively of the Comanche, Kiowa, and Wichita (*Report*, 65). This court is still in successful operation.

INTERTRIBAL COUNCIL OF 1888

The questions of railroads through the reservations, intrusions, allotments, and the ultimate opening of Indian Territory to white settlement, had now assumed such proportions that the civilized tribes had become alarmed and had called an intertribal council to debate measures to meet the emergency. The council met at Fort Gibson, in the Cherokee nation, in June, 1888, with representatives of about twenty tribes in attendance. Although recognizing civilization as their ultimate destiny, they were strongly opposed to any change in the tribal holding of their lands, and the sentiment was practically unanimous against allotment or any disturbance of the existing tribal system. The delegates and speakers from the Kiowa and associated tribes were Täbinä'naka and White-wolf for the Comanche, Big-tree for the Kiowa, White-man for the Apache, and Caddo Jake for the Caddo, Wichita, and smaller bands (*Report*, 66).

DEATH OF SUN-BOY—THE LAST SUN DANCE

In the fall of 1888 died Pai'-tälyi', "Sun-boy," one of the last of the prominent chiefs of the old days of the buffalo hunt and the warpath (see the calendar). The summer of 1890 is notable for the last sun dance (*k'adó*) undertaken by the tribe. On this occasion the agent, making objection to the ceremony, which the Indians refused to abandon, ordered out the troops from Fort Sill to prevent it. On their arrival, although the Kiowa were at first disposed to resistance, upon the advice of Stumbling-bear and some other of the cooler heads, they finally dispersed to their homes, leaving the unfinished medicine lodge standing (see the calendar).

GHOST DANCE INAUGURATED—ÄPIATAN'S JOURNEY IN 1890

In the fall of 1890 Sitting-bull (Hänä'chä-thiak), an Arapaho, came and inaugurated the ghost dance among the Kiowa. As this subject is treated at length in the author's work on "The Ghost dance Religion," in the Fourteenth Annual Report of the Bureau of Ethnology, it need only be mentioned here. Like all the neighboring tribes except the Comanche, the Kiowa went heart and soul into the new religion, which was in line with the previous prophecies of Dátekâñ and Pá-iũgya. A few months later they sent Ä'piatañ, "Wooden-lance," a prominent young man of the tribe, to find the messiah and investigate and report upon his doctrine. On his return in the following spring he denounced the new teacher as an impostor, whereupon the

Kiowa abandoned the dance. Within the last two years, however, they have revived the ghost-dance ceremonies with all the old-time vigor (see the calendar).

In the same winter, in January, 1891, three boys ran away from the



FIG. 52—A'piatañ or Wooden-lance

government school at the agency in consequence of the harshness of a teacher, and a day or two later were found frozen to death in the mountains, having been overtaken by a blizzard while attempting to reach

their homes. The affair naturally created intense excitement in the tribe and threats were made against the teacher who was responsible for the occurrence, but the matter finally quieted down without the necessity of calling on the troops (see the calendar).

ENLISTMENT OF INDIANS AS SOLDIERS

In March, 1891, the Secretary of War authorized the enlistment of an Indian contingent for each of the cavalry and infantry regiments serving in the west. In pursuance of this plan, a troop was enlisted from among the Kiowa, Comanche, and Apache tribes in the fall of 1891 and placed under the command of Lieutenant (now Captain) H. L. Scott, and designated as troop L, of the Seventh cavalry, then stationed at Fort Sill. Of this troop probably two-thirds were Kiowa and Apache. The experiment did not prove satisfactory, and all of the Indian companies have now been disbanded. The Kiowa troop maintained its existence longest, under Captain Scott, who was peculiarly fitted for the position by his intimate and sympathetic acquaintance with Indian habit and belief and his expert knowledge of the sign language. For this reason he has several times been selected by the War Department to investigate threatened troubles among the associated tribes, particularly during the critical period of the ghost dance, and has also been selected by the Indians themselves to represent their interests at Washington (see the calendar; also *War*, 4).

MEASLES EPIDEMIC OF 1892—GRASS LANDS LEASED

The year 1892 was signalized by several important events. Early in the spring an epidemic of measles broke out among the children in the Kiowa school. Instead of isolating and nursing the sick, the superintendent in charge sent the infected children home to their camps, thus spreading the disease broadcast, resulting in the death of about two hundred and twenty persons, nearly all children, among the Kiowa and Apache, or fifteen per cent of the entire number. The superintendent was soon afterward removed. This epidemic was the most terrible calamity that has befallen the tribe in many years. Every family lost relatives, and in addition to the large number of deaths thousands of dollars' worth of property, in the form of horses, wagons, blankets, etc, was destroyed at the graves in accordance with the Indian custom (see the calendar).

As by this time the Indians had learned that the leasing of their grass lands would be a substantial benefit to themselves, they held a joint council in the spring of the same year and authorized Quanah, Lone-wolf, and White-man, head chiefs of the three confederate tribes, to go as delegates to Washington, where they succeeded in negotiating leases for nearly all of their surplus grass lands for an aggregate annual rental of nearly \$100,000. This money, with that received by

the Indian soldiers, has been invested largely in houses and improved stock. Today probably half the Indians of the three tribes are owners of houses paid for with their own money (see the calendar).



FIG. 53—H. L. Scott, Captain, Seventh cavalry, U. S. A.

COMMISSION FOR ALLOTMENT OF LANDS—PROTEST AGAINST DECISION

In the autumn of 1892 a commission, which had already concluded agreements with several other tribes, visited the Kiowa, Comanche, and Apache to negotiate with them for the distribution of individual

allotments and the sale of the remainder of their reservation. As the terms of the Medicine Lodge treaty, under which they hold their present reservation, do not expire until August 25, 1898, the Indians were opposed to any change in the existing conditions, but by bringing strong pressure to bear upon them, an agreement was finally reached by which the reservation was to be thrown open immediately upon the ratification of the contract by Congress. On learning the true nature of the instrument, the Indians denounced the interpreter and demanded that their names be stricken from the paper. This being refused, they repudiated in council the action of the chiefs who had signed, and elected other representatives to go to Washington to protest against the whole

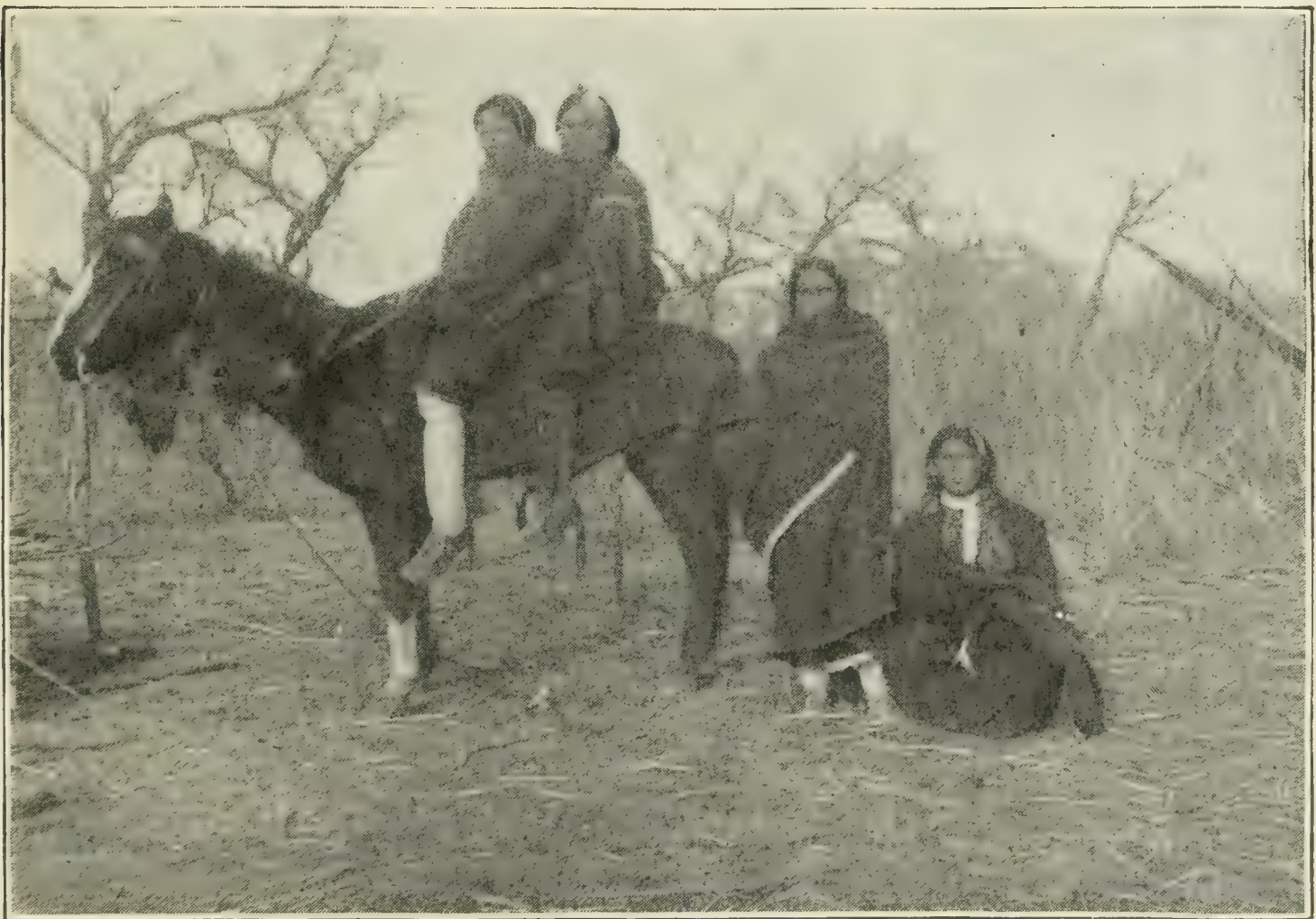


FIG. 54—A group of Kiowa

proceeding. The delegates chosen were Ä'piatañ, already mentioned, Apache John (*Goñk'oñ*, "Stays-in-tipi") and Piänä'vonit, "Big-looking-glass," for the Kiowa, Apache, and Comanche, respectively, with Captain Scott, U. S. A., and Andres Martinez (*Ä'ndali*), an influential Mexican captive among the Kiowa, as interpreter. The delegation arrived in March, 1894, and made such representation of the matter that no action was taken upon the agreement, and it is still unratified.

PRESENT CONDITION—AGENTS IN CHARGE OF CONFEDERATE TRIBES

Realizing that a change is inevitable in the near future, the Indians are going to work, and with the aid of the money received for their grass lands invested in houses, cattle, and improved breed of horses, the opening of small farms, and the general educational work of the schools,

there is a fair prospect that at the expiration of their present treaty in 1898 they will be able to meet the new conditions (see 52d Cong., 2d sess., Senate ex. doc. 17—Comanche, Kiowa, and Apache Agreement; 53d Cong., 2d sess., misc. doc. 102—Kiowa, Comanche, and Apache memorial).

Following are the names of the agents who have been in charge of the Kiowa, Apache, and Comanche since they were first brought upon the reservation in December, 1868. Of the earlier ones, Haworth (*Senpo-gúadal*, "Red-beard") is held in best remembrance:

- 1869—Laurie Tatum (Kiowa name, *Dän-pá-iñgya-t'á-i*, "Bald-head").
- 1873, April—J. N. Haworth (*Senpo-gúadal*, "Red-beard").
- 1878, April—P. B. Hunt (*Tádalk'ia*, "Lean-man").
- 1885, September—J. Lee Hall (*K'ódal-gúadal*, "Red-neck").
- 1887, September—E. E. White, special agent (*T'áiñte*, "White").
- 1888, September—W. D. Myers (*Maiz*).
- 1889, October—Charles E. Adams (*Ádam*).
- 1891, December—George D. Day (*Ímasü'nmot*, "Grinning").
- 1893, June—Hugh G. Brown, captain Twelfth infantry.
- 1893, November—Maury Nichols, lieutenant Seventh infantry (*Dogúatal-táide*, "Young Man Chief").
- 1894, October—W. H. Abell, special agent (*Pá-ehémgóte*, "Lame-bull").
- 1894, November—Frank D. Baldwin, captain Fifth infantry.

SUMMARY OF PRINCIPAL EVENTS

The principal events in the history of the Kiowa may be summarized as follows:

- 1700 (about)—Migration from the mountains to the Yellowstone region.
- 1732—Mentioned in Spanish document of New Mexico.
- 1770 (about)—Massacre of the K'úato and expulsion from the Black Hills.
- 1790 (about)—Peace and alliance with the Comanche.
- 1805—First American mention; Kiowa then on North Platte.
- 1833—Massacre by the Osage and capture of the *taíme*.
- 1834—Dragoon expedition and first official intercourse with United States.
- 1837—First treaty, at Fort Gibson.
- 1839—Smallpox epidemic.
- 1849—Cholera epidemic.
- 1854—Defeat of plains tribes by the Sauk.
- 1864—General outbreak of plains tribes.
- 1866—Death of Dohásän.
- 1867—Medicine Lodge treaty; Kiowa agree to go on reservation.
- 1868—Battle of the Washita; Ute capture the *taíme*.
- 1869—Kiowa go upon present reservation.
- 1871—Setängya killed.
- 1872—First attempt to establish schools.
- 1874—Outbreak of Cheyenne, Comanche, and Kiowa.
- 1879—Practical disappearance of the buffalo.
- 1881—Dátekân's prophecy.
- 1886—First money for grass paid to Kiowa and Apache.
- 1887—Pá-iñgya's prophecy.
- 1890—Last sun dance; beginning of the ghost dance in the tribe.
- 1892—Measles epidemic; unratified agreement of land sale.

SOCIOLOGY OF THE KIOWA

ABSENCE OF THE CLAN SYSTEM

The clan system does not exist among the Kiowa, and there is no evidence that they have ever had it. This may be a surprise to those disciples of Morgan who have assumed that because the system is found among the eastern tribes and certain tribes of the southwest and extreme northwest it is therefore universal and a necessary factor in tribal development. It is by no means universal, and it is doubtful if it exists among the Athapascan tribes of British America, the tribes of the Columbia region, Oregon, or California, or any of the recognized Shoshonean stock with the exception of the Hopi. The Cheyenne and Sioux of the plains seem to know as little of it as do the Kiowa. Clark, in his "Indian Sign Language," says: "I cannot help feeling that Mr Morgan's careful study of the form of government of the Iroquois league colored his writings in regard to all other Indians. Certain it is that no trace now exists of such organization among many of the plains tribes." In another place he states that among the majority of the plains tribes, and perhaps the western Indians generally, judging from their laws of inheritance and marriage customs, the system never did exist (*Clark*, 5). Gatschet, in his great work on the Klamath language, declares that the Klamath Indians of Oregon are absolutely ignorant of the clan system, while Hale, in the "Iroquois Book of Rites," takes the ground that the system is simply an artificial invention, adopted for convenience and spreading from various local centers. In support of the idea that it is artificial rather than natural he points out the fact that it is not found among the Polynesian tribes, who are on about the same plane of development as our Indians (*Hale*, 1). In the United States the clan system seems to be found more particularly among the agricultural tribes.

LOCAL DIVISIONS

Before they were confined to the reservation the Kiowa were grouped into two general local divisions, known, respectively, as *T'ó-k'íñähyup*, "cold men" (i. e., men of the cold, or northern, country), and *Gwá-halégo*, from the Comanche name Kwáhadi or Kwáhari. These terms were practically equivalent to "northern" and "southern," the former ranging chiefly along Arkansas river and the Kansas frontier, while the latter, as the name indicates, associated more with the Kwáhadi Comanche of the region of the Staked plain. As they were merely temporary local designations and not proper band or gentile names, they have now ceased to be of any practical importance.

SUBTRIBES

The Kiowa have six recognized divisions or subtribes, including the Apache, who form a component part of the Kiowa tribal circle. The extinct K'úato formerly made a seventh, but their position in the circle

is now forgotten. These divisions are not clans or gentes (social) based on marriage regulations, but subtribes (political), each division having had originally its own chief, subordinate to the recognized head chief of the tribe, with certain peculiarities of dialect and sometimes its special "medicine" or religious ceremonial. They may have been in the beginning distinct cognate tribes, with the exception of the Apache, which confederated at a later period for mutual assistance. The Comanche, although now allied with the Kiowa, have no part in their tribal organization or ceremonies

THE CAMP CIRCLE

The names of the bands and their order in the camp circle on the occasion of all tribal gatherings are as follows:

1. *K'at'a*, "Biters," i. e., Arikara. This is the largest and most important division, occupying the first place in the camp circle, immediately south of the door or entrance. To it belonged Dohásän, the great chief who ruled the Kiowa for more than thirty years. To his family was assigned the hereditary duty of furnishing the buffalo for each annual sun dance. At present the *K'at'a* may be said to constitute the aristocracy of the tribe. The name is said not to indicate an admixture of Ree or Arikara blood, but simply a more intimate trading association with that tribe in early days. As this association was comparatively modern, the word may be a substitute for another name discarded, in accordance with a Kiowa custom, in consequence of the death of some noted individual of the same name. They are sometimes called *Gá'i-K'at'a*, "Kiowa *K'at'a*," to distinguish them from the Arikara proper.

2. *Ko'gúi*, "Elk." This band took the lead in war ceremonials. *A'dáte*, whose camp was surprised and destroyed by the Osage in 1833, was its chief. Set-t'aiñte and the first Big-bow also belonged to this band.

3. *Gá'-igwá*, "Kiowa proper." This may have been the original nucleus of the Kiowa tribe, as the name would seem to imply. Although not numerous, they are held in much respect, are the keepers of the *taíme*, and have charge of the *K'ado Dó*, or priestly tipi, at the sun-dance ceremony. The western side of the circle properly belongs to them, but in consequence of their small number individuals of other bands sometimes camp with them.

4. *Kiñep*, "Big Shields." To them belonged the *gadómbitsóñhi* image or idol, now lost, which was exposed in front of the *taíme* image at the annual sun dance.

5. *Semüt*, "Thieves," i. e., Apache. Although a distinct tribe, they have formed an integral part of the Kiowa tribal circle from the earliest traditional period.

6. *Koñtä'lyui*, "Black Boys," or *Síndiyúi*, "Sindi's children." No reason is assigned for either of these names, which are about equally

common. Sindi is the great mythic hero of the Kiowa. They are a small band, and occupy the last place in the circle.

7. *K'úato* "Pulling Up." These were exterminated by the Dakota about 1780, as already related. They spoke a peculiar dialect of Kiowa. It is not now known what position they occupied in the tribal circle.

Clark mentions four of these divisions, under the names of Elk (*Kogúi*), Shield (*Kiñep*), Cut-Off (*K'at'a*), and Black (*Koñtälyui*), and adds, "some claim five, the Apache Kiowa band" (*Clark*, 20).

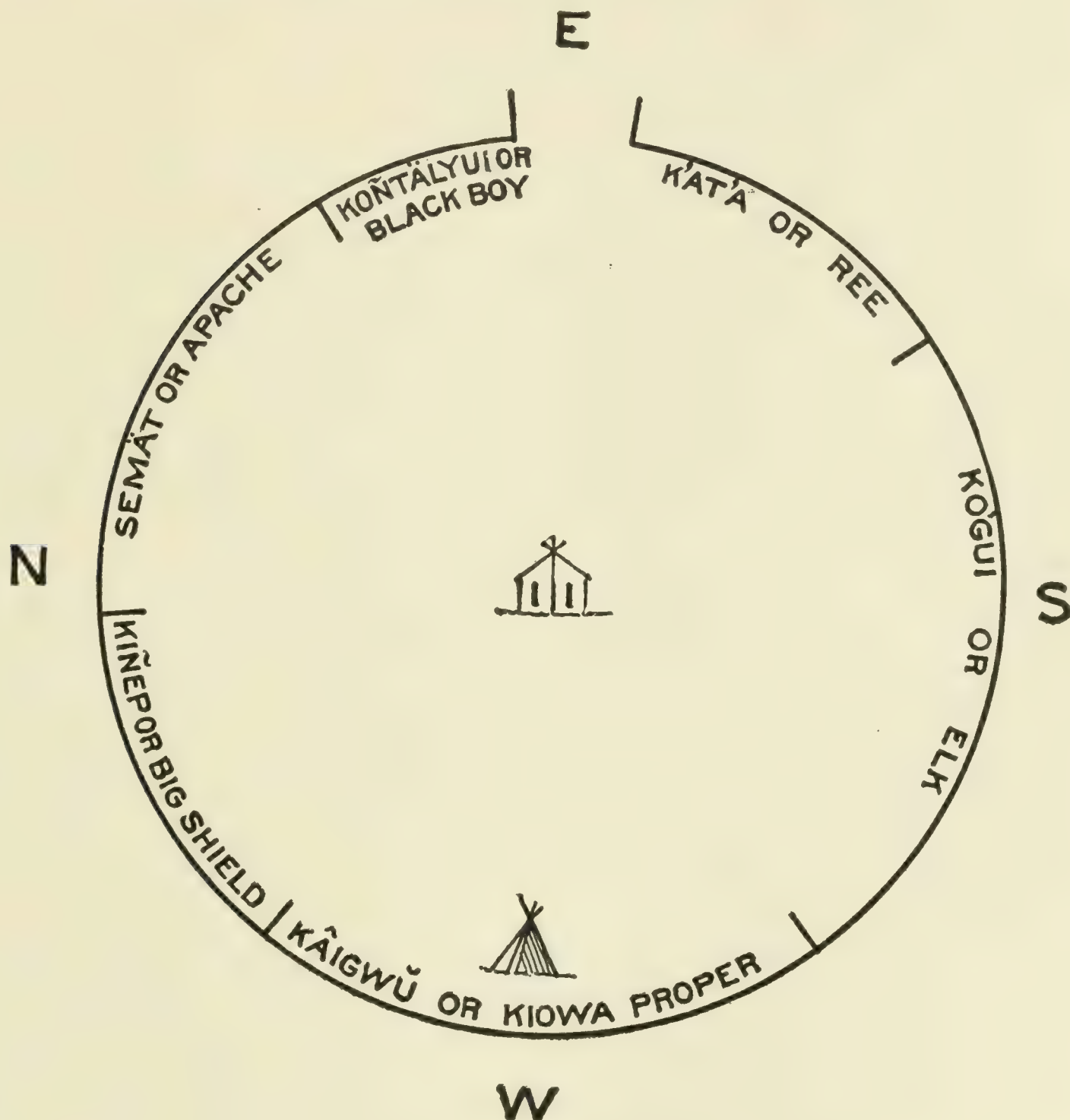


FIG. 55—The Kiowa camp circle

MILITARY ORGANIZATION—YÄ'PÄHE WARRIORS

The Kiowa have an elaborate military organization, now fast becoming obsolete, known as *Yä'pähe*, "Warriors." A similar organization is found among most of the prairie tribes, and is commonly known to the whites as the Dog-soldier society, from an imperfect rendering of the name of one of the principal bands. The Kiowa organization consists of six orders, each having its own dance, songs, insignia, and duties. The members were first enrolled as boys among the "Rabbits," and

were afterward promoted, according to merit or the necessities of war, in regular progression to higher ranks. Only the bravest few, however, ever attained the highest order, that of the *Kâ-itséñko*. Almost every able-bodied man was enrolled. The orders, beginning with the lowest, are as follows:

1. *Polä'ñyup* or *Tsä'ñyui*, "Rabbits." Boys above the age of eight or ten years, who were drilled in their future duties as warriors by certain old men. The step of their dance is intended to imitate the jumping of a rabbit.

2. *Ädaltóyui* or *Téñbeyu'i*, "Young (wild) Sheep."

3. *Tseñtä'nmo*, "Horse Head-dresses." (?)

4. *Toñkóñko*, "Black Legs."

5. *T'äñpéko*, "Skunkberry People" or *Tséñ-á'dalka-i*, "Crazy Horses."

6. *Kâ'-itséñko*, "Real or Principal Dogs (?)." These were the picked men of the warriors and were limited to ten in number. According to the myth, their founder saw in a vision a body of warriors dressed and painted after the manner of the order, accompanied by a dog, which sang the song of the *Kâ'-itséñko* and commanded him, "You are a dog; make a noise like a dog and sing a dog song." Their peculiar insignia and obligations will be described in another place (see the calendar, summer 1846.)

Clark gives the names of the Kiowa orders as follows, omitting the *Poläñyup*: Raven Soldiers or Black Leggings (*Toñkoñko*); Sheep (*Ädaltóyui*); Feather Head (*Tseñtä'nmo*); Horse (*Kâ-itséñko*); War-club (*T'äñpéko*). He adds, "The Kiowa Apache have only three bands, viz: 1st, Big Horse; 2d, Raven; 3d, Swift Fox" (*Clark*, 6).

At home the *Yä'pähe* acted as camp police and leaders in the tribal ceremonies; abroad they were the warriors and conductors of the hunt. Battey gives an illustration of the system as he once saw it in practical operation:

Being determined that none of their thoughtless young men should go raiding in Texas and thereby bring trouble upon the tribe, the Kiowas, immediately after the whole tribe got together on Pecon creek, organized a military system, under the control of the war chiefs, which was immediately put into operation. By this a strong guard of their soldiers were continually watching day and night while in camp to prevent any such enterprise from being undertaken. In moving from place to place these soldiers marched on each side of the main body, while a front guard went before and a rear guard behind, thus preventing any from straggling.

Their buffalo hunts were conducted in the same military order. The soldiers, going out first, surrounded a tract of country in which were a large herd of buffalo, and no one might chase a buffalo past this ring guard on pain of having his horse shot by the soldiers. Within the ring hundreds of men on horseback were chasing and shooting the huge creatures with revolvers or bows and arrows until each had killed as many as his female attendants could skin and take care of (*Battey*, 14).

HERALDIC SYSTEM

In connection with their military and social organization the Kiowa and Apache have a system of heraldry, which finds tangible expression

in the painting and ornamentation of their shields and tipis. There were formerly about fifty shield patterns used in the two tribes, and all the warriors carrying shields of the same pattern constituted a close brotherhood, with similar war cries, body paint, and ceremonial taboos and regulations. Every prominent family also had its heraldic tipi, which occupied its fixed place in the tribal camp circle. Special taboos and rules belonged to the tipi as to the shield, and the right of hereditary descent was as nicely regulated as property ownership among the whites. This system of heraldry will form the subject of a future monograph.

NAME SYSTEM

Their system of personal names is also interesting. All the names have meaning and are as much a part of the owner as his hand or his foot. Children are usually named soon after birth by one of the grandparents or other relative not the parent; the name is commonly suggested by some passing incident, but may be hereditary, or intended to commemorate the warlike deed of some ancestor. In this way a girl may bear a war name bestowed by her grandfather to preserve the recollection of his own achievement. There are no ordinal names as among the eastern Sioux, no clan names as among the Shawnee, and no names which indicate the band of the individual. Young men as they grow up usually assume dream names, in obedience to visions, and these are sometimes superseded in later life by names acquired on the warpath, the hunt, or in council. Frequently an aged warrior, who feels that his day is near its close, formally gives his name to some young man who seems to him to merit the honor; the older man then assumes a new name, or more frequently lives out his remaining years without a name, being referred to and addressed simply as "old man." Sometimes the old warrior, having outlived the need of a name and not regarding any younger man as worthy to bear it, deliberately "throws it away" and is henceforth nameless. Should he die without having bestowed his name upon a successor, the name dies with him and can not be revived. The name of the dead is never spoken in the presence of the relatives, and upon the death of any member of a family all the others take new names—a custom noted by Raleigh's colonists on Roanoke island more than three centuries ago. Moreover, all words suggesting the name of the dead person are dropped from the language for a term of years, and other words, conveying the same idea, are substituted. The same custom exists among the Comanche and perhaps among other tribes.

MARRIAGE

Marriage among the Kiowa, as among the plains tribes generally, is a simple affair, with none of the elaborate ceremonials found among the Hopi and other sedentary Indians. About all that is necessary is that

the maiden of the young man's choice shall be willing, and, this having been ascertained by the lover, he sends some friend as a mediator to her parents to make an offer of ponies or other property to compensate them for the loss of their daughter. If both sides come to an agree-



FIG 56—Māñyi-tén or Woman-heart, a typical Kiowa

ment, the match is made, and the young couple, with the assistance of their friends, set up housekeeping on their own account. Compulsion is no more brought to bear upon the girl than in civilized communities; the brother of the girl has as much to do with the decision of the case

as her parents, and continues to claim a sort of guardianship over her even after her marriage. The marriageable age is about fourteen for girls and sixteen for boys. In general the husband goes to live among his wife's people instead of taking her to his own camp. The father seems to exercise more control over his children than among tribes having the clan system and mother right. There appears to be no fixed rule of inheritance, but shield, tipi, and band name usually descend in the male line. The husband avoids the mother-in-law, but not to the same extent as among other plains tribes. Polygamy is allowed, but is not frequent, only a few of the Kiowa now having two wives, and none more than that number. In the old times it was more common, in consequence of the surplus of women resulting from the killing off of the men in their constant wars. The father of T'ebodal is famous for having had ten wives; Quanah, the present head chief of the Comanche, has six. It was common to marry sisters of the same family, and according to tribal custom, which had analogy among the ancient Hebrews, the man who married the eldest daughter had first claim upon her sisters.

Divorce is easy and without ceremony, but not so common as might be supposed, there being many couples that have lived faithfully together for nearly half a century. Adultery is punished by taking or destroying the property of the guilty man. The woman is simply "thrown away" by her husband, although in theory her life is forfeited. In former times he might kill her or cut off her nose, as was done also among the neighboring tribes, but this latter custom is now only a memory.

TRIBAL GOVERNMENT

The tribal government was formerly committed to the care of a head chief and the chiefs of the several bands, together with the war chiefs, who had control in military affairs. Women had no voice in the government. From the evidences of tradition and the statements of old men, the chiefs in former times, before tribal customs were demoralized by the advent of the conquering race, must have exercised almost despotic powers and were feared as well as respected by their people. Their last great chief was Dohásän, who died in 1866, since which time no one has had the unquestioned allegiance of the whole tribe. The present officially recognized head chief is Lone-wolf, the adopted son of the hostile leader of the same name in the last outbreak. The elder Lone-wolf formally bestowed his own name upon the younger man in 1879, thus publicly recognizing him as his successor. Camp and ceremonial regulations were enforced and their violation punished by the Yä'pähe, acting under direction of the war chiefs. Personal grievances were avenged by the injured party or by his nearest relatives, without interference by the tribe.

CHARACTER

In character the Kiowa are below the standard. Having been intimately associated with them for some years, the author would be better pleased to make a different showing, but truth compels the statement.

Tribal traits are strongly marked among Indians. The Sioux are direct and manly, the Cheyenne high-spirited and keenly sensitive, the Arapaho generous and accommodating, the Comanche practical and businesslike, but the Kiowa, with some honorable exceptions, are deficient



FIG. 57—Gaápiatáñ (*alias* Haitsiki) or Feathered-lance, a typical Kiowa

in all these qualities. They have the savage virtue of bravery, as they have abundantly proven, but as a people they have less of honor, gratitude, and general reliability than perhaps any other tribe of the plains. The large infusion of captive blood, chiefly Mexican, must undoubtedly

have influenced the tribal character, but whether for good or evil the student of heredity must determine.

The report of Captain Alvord, already quoted at length, affords a good insight into Kiowa character. Gregg in 1844 described them as "one of the most savage tribes that infest the western prairies" (*Gregg*, 7). Captain (afterward General) John Pope ten years later called them deceitful and unreliable and "absolutely destitute of most of the chivalrous characteristics which distinguish the Comanche brave." General Pope in 1870 denounced them as being altogether the worst Indians the government had to deal with, having been for twenty-five years past "the most faithless, cruel, and unreliable of all the Indians of the plains." About the same time General Sheridan expressed his lasting regret that he did not hang Set-t'aiñte and Lone-wolf and punish the whole tribe when he first met them. The Quaker Battey, a good friend of theirs, describes them as "the most fierce and desperately blood-thirsty tribe of the Indian Territory"—a people who had hitherto resisted all attempts to bring them into friendly relations with the government or to a knowledge of civilization, still continuing to commit depredations upon the white settlements, stealing horses and mules, murdering men and women and carrying their children into captivity. He says it would probably be difficult to find in the whole tribe a man whose hands had not been imbrued in blood. Clark states that in personal appearance, intelligence, and tenacity of purpose he considers them inferior to the Comanche (*Pacific*, 1; *War*, 5; *Battey*, 16; *Clark*, 8).

POPULATION

It is always difficult to estimate the population of a roving tribe, and almost invariably first reports are greatly exaggerated. This is particularly true of the Kiowa, whose restless disposition and inveterate habit of raiding made them equally at home anywhere along a frontier of a thousand miles. Excluding some extravagant early estimates, the statements of the most competent observers, and the official reports since they have been put upon the reservation, all indicate that the combined population of the confederated Kiowa and Apache was never much more than 1,600, or 1,800 at the greatest, of whom the Apache numbered nearly one-fourth. No really accurate count was ever made until after their final subjugation in 1875, and it is worth noting that their numbers, which had been reported at 2,774 and 2,302 in the preceding two years, at once fell to 1,414, and remained nearly stationary at that figure until the epidemic of 1892. Battey's estimate in 1873 (in which he probably means to include the Apache) of 1,600 to 1,650 is probably very nearly correct. In 1892 the Kiowa numbered 1,014 and the Apache 241, a total of 1,255, being a decrease from 1,476 in the previous year in consequence of the epidemic of measles. In November, 1896, they numbered: Kiowa 1,065, Apache 208, a total of 1,273. The associated Comanche at the same time numbered 1,545. In each

of these tribes there is a large captive element of which no separate account is taken, but investigation would probably show that at least one-fourth of the whole number have more or less of captive blood. The captives are chiefly Mexicans and Mexican Indians, with Indians of other tribes, and several whites taken from Texas when children, including one old man who still remembers having gone to school in Germany and having crossed the ocean with his parents (see Pope in *Pacific*, 2).

Some of the estimates are based on the number of tipis or warriors, an uncertain ratio, which varies greatly in different tribes. With the Kiowa it may be assumed to equal 2 warriors and 6 or 7 souls to a tipi. Below are given the various estimates and enumerations, beginning with the earliest, that of Lewis and Clark in 1805. The estimates of 1807, 1810, 1841-1845, and perhaps of 1850 probably include the Apache.

- 1805—Kiowa and Wetepahatoo, 70 tipis, 200 warriors, 700 souls (Lewis and Clark, 5).
- 1810—1,000 warriors, i. e., about 3,000 souls (Pike, Expedition, 1810).
- 1814—Wate-pana-toe and Ryuwa, 200 warriors, 900 souls (Brackenridge, Views of Louisiana, 85, 1814).
- 1820—Wettaphato, 1,000 souls, 900 souls (Morse, 3).
- 1828—140 families (i. e., about 950 souls?) (Spanish doc. of 1828, in Societa Geog. Mex., 265, 1870).
- 1829—Keawas, 1,000 souls (Porter, in Schoolcraft, Ind. Tribes, III, 596, 1853).
- 1836—Kioways, 1,800 (estimate in Schoolcraft, III, 611).
- 1841-45—1,800 souls (Indian Reports for these years; for the same period the Comanche are estimated at 19,200).
- 1846—400 tipis, 2,000 souls (Bent, in Rept., 1846).
- 1849—300 warriors, 1,500 souls, a "careful estimate" (Neighbors, Report, 1849; he estimates the Comanche at 4,000 warriors and 20,000 souls).
- 1850—Kayuguas, 2,000 souls, not to exceed (War, 6).
- 1854—1,500 souls, probably not more than (*Pacific*, 3).
- 1854—2,800 souls (Agent Whitfield, Report, 1855; in the same report we find another agent estimating the Kiowa and Comanche at 20,000 in 1852).
- 1865—1,800 (Report, 1865); 1,500 to 1,700 souls, about 280 tipis, without Apache (Agent Leavenworth, in Report on Condition of Indian Tribes, 37, 1867).
- 1866—Kiowa and Comanche, without Apache, 2,800 (Report, 1866).
- 1867—280 tipis, 1,680 souls, without Apache (estimate in report of Medicine Lodge treaty, Indian Miscellany).
- 1867-68—Kiowa and Comanche, without Apache, 4,000 (Report, 1867 and 1868). The peace commission at the same time, 1867, estimates these two tribes at 14,800.
- 1869-70—1,896 (Reports for 1869 and 1870).
- 1871—1,776 (Report).
- 1872—1,200; 1,930 (Report).
- 1873—2,000 (Report); 1,600 to 1,650 at 6 to a tipi (Battey, 17).
- 1874—1,700 (Report; all following are from the official reports).
- 1875—1,070.
- 1876—1,090.
- 1877—same.
- 1878—1,120.
- 1879—1,138.
- 1880—1,139.

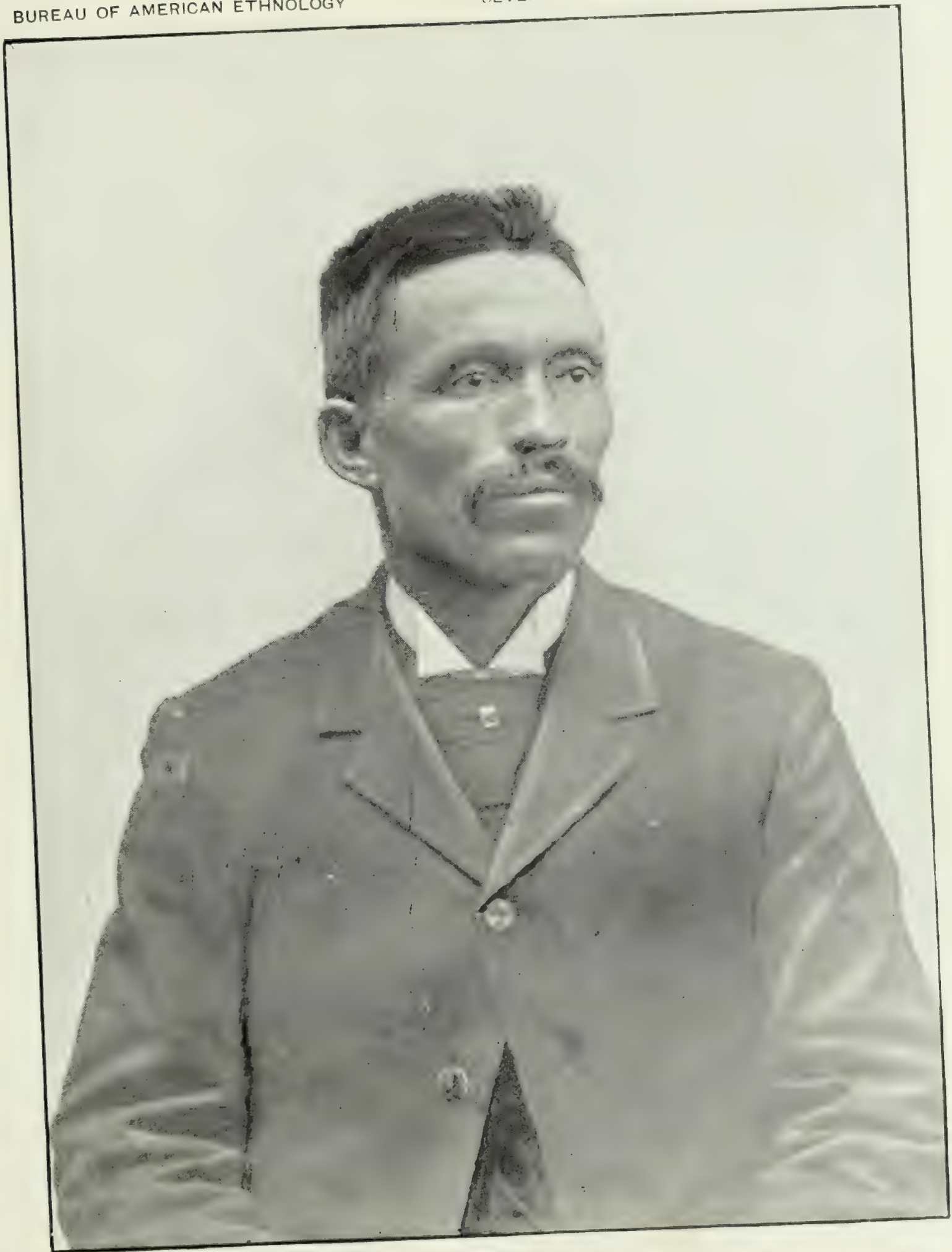


PHOTO BY HILLERS. 1893

ANDRES MARTINEZ ("ÄN'DALI")

1881—1,145.
 1882—1,176.
 1883—1,167.
 1884—1,152.
 1885—1,169.
 1886—1,164.
 1887—1,179.
 1888—1,121.
 1889—1,142, "a very careful census."
 1890—1,140.
 1891—1,151.
 1892—1,014 (decrease from epidemic).
 1893—1,017.
 1894—same; taken from preceding.
 1895—1,037.
 1896—1,065.

RELIGION OF THE KIOWA

SCOPE OF THEIR BELIEF

In religion the Kiowa are polytheists and animists, deifying all the powers of nature and praying to each in turn, according to the occasion. Their native system has no Great Spirit, no heaven, no hell, although they are now familiar with these ideas from contact with the whites; their other world is a shadowy counterpart of this. There is an indistinct idea of transmigration, owls and other night birds being supposed to be animated by the souls of the dead, with a general belief in ghosts, witches, and various sorts of good and bad "medicine." Dreams and visions are supernatural revelations, to be trusted and obeyed implicitly.

A curious instance of the persistence of the Indian beliefs in spite of educational influences is afforded by the case of the late Kiowa interpreter, a full-blood Indian, who had been reared and educated in the east, graduated in theology, and was ordained to the ministry, married a white woman, and returned as a missionary to his people. The Indians accused him of deceiving them as to the terms of the treaty, and told him that he "could not live," and he died shortly afterward in the belief that he had been bewitched by the medicine-men as a punishment for his part in the negotiations. The fact is a matter of official record, as well as of contemporary newspaper publication.

THE SUN

The greatest of the Kiowa gods is the Sun; by him they swear, to him they make sacrifice of their own flesh, and in his honor they held the great annual *k'ado* or sun dance. Next to the sun the buffalo and the *señi* or peyote plant claim reverence, and these too may be reduced to the same analysis, as the buffalo bull in his strength and majesty is regarded as the animal symbol of the sun, while the peyote, with its circular disk and its bright center, surrounded by white spots or rays, is its vegetal representative. The *â'dalbeáhya* also derives its origin from the sun. Unlike the agricultural tribes, they pay but

little attention to the rain gods and seem to have no reverence for the snake. Each shield order prays to some special deity, and every man has also his own personal "medicine," somewhat like the guardian angel or patron saint of the Catholic system. There are also supernatural heroes, of whom the Sun-boy and Sindi are the greatest, with ogres, dwarfs, water people, monsters, and all the other features of the orthodox fairy book.

OBJECTS OF RELIGIOUS VENERATION

Their most sacred objects of religious veneration are the *Á'dalbeáhya*, the *Taíme*, the *Gadómbítsoñhi*, and the *señi* or peyote. Their great tribal religious ceremony is the *k'ado* or sun dance. Their tribal religion is that which centers around the *á'dalbeáhya* and the *taíme*. The worship of the peyote, although now general, excepting among the oldest men, is comparatively modern with the Kiowa, having been adopted from the more southern tribes. These two systems are compatible and auxiliary to each other. In 1890 the new religion of the ghost dance was introduced among the Kiowa. It is essentially different from the older Indian systems and antagonistic to them, being based on the doctrine of one God, although it preaches a return to the old Indian life.

The *Á'dalbeáhya* (the word has some connection with *ádal*, "hair," and scalp) is the eucharistic body of their supernatural hero teacher, the Sun-boy, and has been known among them almost from the beginning of their existence as a people. According to the myth, which has close parallels in other tribes, a girl was one day playing with some companions when she discovered a porcupine in the branches of a tree. She climbed up to capture it, but as she climbed the tree grew, carrying her with it, until it pierced the arch of the sky into the upper world; here the porcupine took on his proper form as the Son of the Sun; they were married and had a son. Her husband had warned her that, in her excursions in search of berries and roots, she must never go near the plant called *ázón* (pomme blanche, *Psoralea esculenta*) if its top had been bitten off by a buffalo. Like Eve, or Pandora, she longed to test the prohibition, so one day while digging food plants she took hold of a pomme blanche which a buffalo had already cropped and pulled it up by the root, leaving a hole through which she saw far below the earth, which she had forgotten since the day that she had climbed the tree after the porcupine. Old memories awakened, and full of an intense longing for her former home she took her child and fastening a rope above the hole began letting herself down to the earth. Her husband, returning from the hunt, discovered her absence and the method of her escape, and throwing a stone after her through the hole, before she had reached the end of the rope, struck her upon the head and she fell to the ground dead. The child was uninjured, and after staying some time beside the body of his mother he was found



THE PORCUPINE IN THE TREE, AND FLIGHT OF THE SUN WOMAN
(FROM THE NATIVE DRAWING)

and cared for by Spider Woman, who became a second mother to him. One day in playing he threw upward a gaming wheel, which came down upon his head and cut through his body without killing him, so that instead of one boy there were now twin brothers. After many adventures, in the course of which they rid the world of several destructive monsters, one of the brothers walked into a lake and disappeared forever under its waters, after which the other transformed himself into this "medicine," and gave himself in that shape to the Kiowa, who still preserve it as the pledge and guardian of their national existence. This *â'dalbeáhya*, or, as it is sometimes called, the *tä'lyí-dá-i*, "boy-medicine," is in ten portions, in the keeping of as many priests. Its chief priest is T'ébodal, the oldest man of the tribe, with whom the author once had the opportunity of seeing the pouch in which it is carried, for no man, unless possibly the priest himself, has ever been permitted to open it and look upon the contents. It is kept in a small pouch fringed with numerous scalps, in a special tipi appointed for its residence; it is brought out for use in connection with a sweat-house ceremony as individuals may desire to sacrifice to it, and not, like the *taíme*, at tribal gatherings. It is briefly mentioned by Clark in his work on the sign language (*Clark*, 7).

The *Gadómbítsoñhi*, "Old-woman-under-the-ground," belonged to the Kiñep band of the Kiowa. It was a small image, less than a foot high, representing a woman with flowing hair. It was exposed in front of the *taíme* at the great sun-dance ceremony, and by some unexplained jugglery the priest in charge of it caused it to rise out of the ground, dance in the sight of the people, and then again sink into the earth. A few years ago it was stolen by a crazy Indian from the priest who guarded it and has never since been recovered, although there are stories in the tribe of hunters belated in the mountains, or beside unfrequented streams, who have caught glimpses of a wailing dwarf with disheveled hair who vanished as soon as discovered, and is believed to have been the lost *gadómbítsoñhi*.

The *Señi*, "prickly fruit," the peyote or mescal plant, is a small species of cactus of the genus *Lophophora* (Coulter), which grows in the stony hill country along the Mexican border. On account of its medical properties and its wonderful effect upon the imagination, it is regarded by the Indians as the vegetal incarnation of a deity, and a whole system of myth and ritual has grown up in connection with its use. The rite originated among the more southern tribes, and has come through the Mescalero and Comanche to the Kiowa within about fifty years. The ceremony was first brought to public notice by the author and may be the subject of a more extended monograph at some future time.

Another ritual, pertaining more particularly to women, was dedicated to the Star Girls, or Pleiades (*Dä'-mü'tán*). Its last priestess died a few years ago.

The great central figure of the *k'adó*, or sun dance, ceremony is the *taíme*. This is a small image, less than 2 feet in length, representing a human figure dressed in a robe of white feathers, with a headdress consisting of a single upright feather and pendants of ermine skin, with numerous strands of blue beads around its neck, and painted upon the face, breast, and back with designs symbolic of the sun and moon. The image itself is of dark-green stone, in form rudely resembling a human head and bust, probably shaped by art like the stone fetishes of the Pueblo tribes. It is preserved in a rawhide box in charge of the hereditary keeper, and is never under any circumstances exposed to view except at the annual sun dance, when it is fastened to a short upright stick planted within the medicine lodge, near the western side. It was last exposed in 1888 (see the calendar). The ancient *taíme* image was of buckskin, with a stalk of Indian tobacco for a headdress. This buckskin image was left in the medicine lodge, with all the other adornments and sacrificial offerings, at the close of each ceremony. The present *taíme* is one of three, two of which came originally from the Crows, through an Arapaho who married into the Kiowa tribe, while the third came by capture from the Blackfeet.

The tobacco upon the head of the ancient *taíme* is another evidence of the northern origin of the Kiowa, as the Kutenai, Blackfoot, and other tribes living near and across the Canadian border are noted for their cultivation of tobacco, and have a special tobacco dance and ceremonies. The more remote tribes along the northwest coast are equally celebrated for their carving in stone, the material used being commonly a black slate, and the original stone *taímes* may have come from that region.

According to the legend, which is told with the exactness of an historical tradition, an Arapaho, who was without horses or other wealth, attended with his tribe the sun dance of the Crows and danced long and earnestly before the "medicine," in hope that it would pity him and make him prosperous. The chief priest of the Crows rewarded him by giving him the *taíme* image, notwithstanding the protests of the Crows, who were angry at seeing such favor shown to a stranger. Fortune now smiled upon the Arapaho; he stole many horses and won new blessings for himself by tying numerous ponies to the medicine lodge as a sacrifice to the *taíme*, until at last his herd was of the largest. Being now grown wealthy, when next his own people visited the Crows he collected his horses and started back with them, but the jealous Crows followed secretly, untied the *taíme* bag from the pole in front of his tipi and stole it, as Rachel stole her father's gods. On discovering his loss the Arapaho made duplicates, which he took back with him to his own people. He afterward married a Kiowa woman and went to live with her tribe, bringing with him the *taíme*, which thus became the medicine of the Kiowa. Since that time the *taíme* has



PEYOTE PLANT AND BUTTON

been handed down in his family, the keeper being consequently always of part Arapaho blood.

The present guardian is a woman, Émaä, who succeeded to the office on the death of Taíméte, "*Taíme*-man," in 1894; she is the ninth successive guardian, the Arapaho being the first. The fifth keeper, Ánsogíani, "Long Foot," or Ánsó'te, held it forty years—from before the Osage massacre until his death in the winter of 1870–71. Assuming that the combined terms of the first four guardians equaled in time the combined terms of the last four—i. e., about sixty or sixty-five years, or from about 1830 to 1894—we would have 1770 as the approximate date when the Kiowa obtained the present *taíme* image. As previously stated, they already had the ceremony and an equivalent image of buckskin. Of the two *taíme* images, both of which were of the same shape and material, one, the "man," was small, only a few inches in length, while the other, the "woman," was much larger. It is believed among the Kiowa that the Crows still have the originals which they stole from the Arapaho.

Long afterward, after the Kiowa had confederated with the Comanche, the latter had a fight with the Blackfeet, in which they killed a warrior and captured his medicine. The Comanche captor, so the story goes, kept the medicine one night in his tipi, but it kept up a strange noise, which so frightened him that the next day he gave it to a Kiowa, who pulled off a long "tooth" attached to it, and thenceforth it was silent. Learning afterward that it was a part of the *taíme* medicine, he gave it to the *taíme* keeper, who put it with the other images. It is said to have been nearly similar in appearance to the smaller image.

The complete *taíme* medicine thus consisted of three decorated stone images, a large one or "woman," a smaller one called a "man," and a third one closely resembling the second. They were kept in a rawhide case known as the *taíme-bíïmká'i*, shaped somewhat like a kidney (see figure, summer 1835), and painted with *taíme* symbols, the large image being in one end of the case and the two smaller ones at the other; some say that the third image was kept in a separate box by a relative of the *taíme* priest. The smaller images, like the ark of the covenant, were sometimes carried to war, the box being slung from the shoulders of the man who carried it, and consequently were finally captured by the Ute. The large image, the "woman" *taíme*, was never taken from the main home camp.

The *taíme* has been twice captured by enemies, first by the Osage in 1833, and again by the Ute in 1868. In the first instance the Osage surprised the Kiowa camp and captured all the images with the bag, killing the wife of the *taíme* priest as she was trying to loosen it from its fastenings, but returned it two years later, after peace had been made between the two tribes (see the calendar, 1833 and 1835). In

the other case the Kiowa had taken the two smaller images, as a palladium of victory, upon a war expedition, when they were met by a war party of Ute, who defeated them, killed the bearer of the medicine, and carried off the images, which have never since been recovered. The larger image is still with the tribe (see the calendar, 1868; also plate LXIX).

TRIBAL MEDICINES OF OTHER INDIANS

Nearly every important tribe, excepting perhaps those aboriginal skeptics, the Comanche, has or did have a tribal "medicine" equivalent to the *taíme*, around which centers the tribal mythology and ceremonial with which the prosperity and fate of the tribe is bound up. With the Cheyenne this is a bundle of sacred arrows, now in the keeping of one of the southern bands near Cantonment, Oklahoma. With the Arapaho it consists of a pipe, a turtle, and an ear of corn, all of stone, wrapped in skins, and kept by the hereditary priest with the northern branch of the tribe in Wyoming. Among the Omaha it was a large shell, now preserved in the Peabody Museum at Cambridge, Massachusetts. With the Creeks it is a set of graven metal tablets, possibly relics of De Soto's disastrous expedition through the gulf states, religiously guarded by the priest of the Wind clan of the nation in Indian Territory.

THE SUN DANCE

The great tribal ceremony of the Kiowa was the *k'adó*, or sun dance, which was commonly celebrated annually when the down appeared on the cottonwoods, i. e., about the middle of June. In their calendar system the summers are counted by *k'adós*, the winters being designated as "cold seasons." On this occasion the whole tribe encamped in a circle, each band in its appropriate place, with the *k'adó* or medicine lodge in the center. Within the medicine lodge the *taíme* was exposed during the continuance of the ceremony, which lasted four days, although the preliminary buffalo hunt and other necessary arrangements occupied much more time. Space forbids a detailed account of the ceremony, which was common to most of the prairie tribes, and has been described with more or less accuracy by various writers. The Kiowa sun dance resembled that of the Dakota, Cheyenne, and other tribes in its general features—the search for the buffalo, the arrangement of the camp circle, the procession of the women to cut down the tree for the center pole of the medicine lodge, the sham battle for possession of the pole, the building of the medicine lodge, and the four days' dance without eating, drinking, or sleeping. It differed radically, however, in the entire absence of those voluntary self-tortures which have made the sun dance among other tribes a synonym for savage horrors. With the Kiowa even the accidental shedding of blood on such an occasion was considered an evil omen, and was the signal for abandoning the dance; voluntary laceration by



THE TAIME

way of sacrifice was practiced at other times, but not at the *k'ado*. Among the Kiowa the center pole must always be cut down by a captive woman. On account of the dread in which the *taíme* is held, by reason of the many taboos connected with it, they have also a captive, taken from Mexico when a boy and given to the *taíme* for this special purpose, to unwrap it and set it in place at the ceremonial exposure, so that should any regulation be inadvertently violated, the punishment would fall upon the captive and not upon the tribe. It is hardly necessary to state that this Mexican captive has as perfect faith in the *taíme* as the priestly keeper himself.

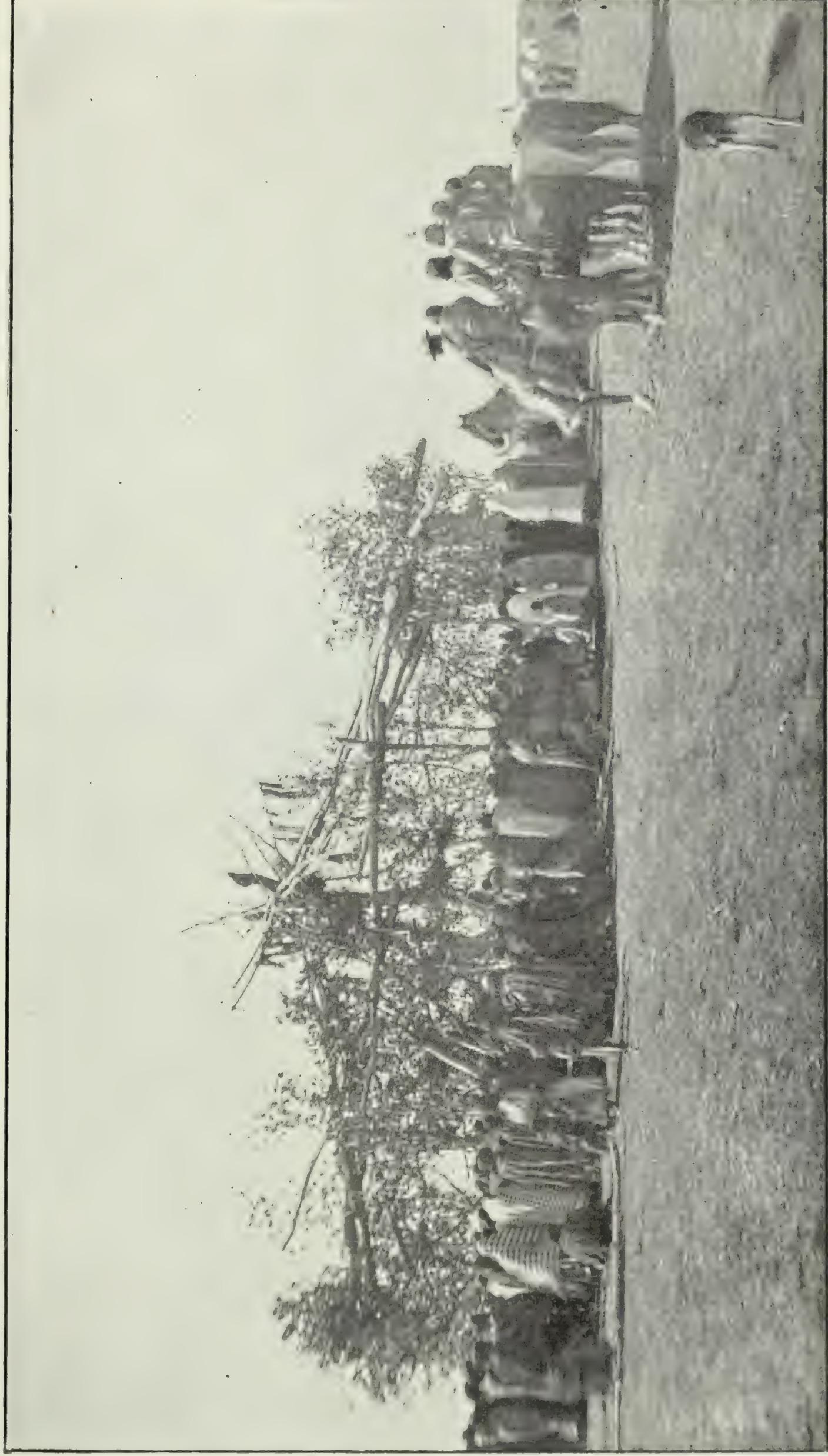
In the Sett'an calendar the summer is always designated by a rude figure of the medicine lodge. On the Anko calendar the distinction is made by the decorated center-pole of the lodge. Medicine-lodge creek, where the famous treaty was negotiated, derives its name from several medicine lodges formerly standing on its banks near the southern Kansas line, this being a favorite spot for the sun dance with both the Kiowa and Cheyenne. The following description of the medicine lodge is from Battey's account of the Kiowa sun dance witnessed by him in 1873, to which account the reader is referred (*Battey, 15*):

The medicine house is situated nearly in the center of the encampment, is circular in form, and about 60 feet in diameter, having its entrance toward the east. It is built by erecting a forked post, 20 feet high, perhaps, for a central support; around this, and at nearly equal distances, are 17 other forked posts, forming the circumference of the building. These are from 12 to 15 feet in height, and all of cottonwood. Small cottonwood trees are tied on the outside of these, in a horizontal position, with ropes of rawhide, having limbs and leaves on them. Outside of these small cottonwood trees are placed in an upright position, thus forming a wall of green trees and leaves several feet in thickness, in the midst of which many hundred spectators afterwards found a cool retreat, where they could observe what was going on without making themselves conspicuous. Long cottonwood poles extend from each of the posts in the circumference to the central post, and then limbs of the same are laid across these, forming a shady roof one-third of the way to the center.

The central post is ornamented near the ground with the robes of buffalo calves, their heads up, as if in the act of climbing it. Each of the branches above the fork is ornamented in a similar manner, with the addition of shawls, calico, scarfs, etc., and covered at the top with black muslin. Attached to the fork is a bundle of cottonwood and willow limbs, firmly bound together and covered with a buffalo robe, with head and horns, so as to form a rude image of a buffalo, to which were hung strips of new calico, muslin, strouding, both blue and scarlet, feathers, shawls, etc., of various lengths and qualities. The longer and more showy articles were placed near the ends. This image was so placed as to face the east. The lodges of the encampment are arranged in circles around the medicine house, having their entrances toward it, the nearest circle being some 10 rods distant. . . .

The ground inside the inclosure had been carefully cleared of grass, sticks, and roots, and covered several inches deep with clean white sand. A screen had been constructed on the side opposite the entrance by sticking small cottonwoods and cedars deep into the ground, so as to preserve them fresh as long as possible. A space was left, 2 or 3 feet wide, between it and the inclosing wall, in which the dancers prepared themselves for the dance, and in front of which was the medicine. This consisted of an image lying on the ground, but so concealed from view in the screen as to render its form indistinguishable; above it was a large fan made of

eagle quills, with the quill part lengthened out nearly a foot by inserting a stick into it and securing it there. These were held in a spread form by means of a willow rod or wire bent in a circular form; above this was a mass of feathers, concealing an image, on each side of which were several shields highly decorated with feathers and paint. Various other paraphernalia of heathen worship were suspended in the screen, among these shields or over them, impossible for me to describe so as to be comprehended. A mound had also been thrown up around the central post of the building, 2 feet high and perhaps 5 feet in diameter.



ARAPAHO SUN-DANCE LODGE, 1893



PHOTO BY JACKSON, 1872

PACER (PESO), FORMER HEAD-CHIEF OF THE KIOWA APACHE

THE NADIISHA-DENA OR KIOWA APACHE

TRIBAL SYNONYMY

- Apaches*—Agent Thomas Fitzpatrick, Ind. Report, 52, 1850. This has been their official popular name for the last fifty years.
- Apaches of Arkansas river*—Agent J. W. Whitfield, Report, 255, 1855.
- Apaches of the Plains*—Pope, 1854, in Pacific Railroad Survey, 17, 1855.
- Kiowa Apaches*—Clark, Indian Sign Language, 33, 1885.
- Ésikwíta*—Properly the name of the Mescalero Apache, but in various forms—Essequeta, etc—has sometimes been incorrectly applied to the Kiowa Apache.
- Gáta'ka*—Mooney, Misc. Ind. MS. So called by the Pawnee.
- Ca'taká*—Lewis, Report, 1805, in Mess. from the President communicating discoveries by Lewis and Clark, etc, 38, 1806.
- Cataha*—Lewis, Travels, 15, 1809 (misprint).
- Cattako*—Lewis and Clark, Discoveries, 23, 1806.
- Cuttako*—American State Papers, IV, 710, 1832.
- Gataea* (for Gataca)—La Salle, 1682, in Margry, Découvertes, II, 168, 1877.
- Gataka*—Harris, Coll. Voy. and Travels, I, map, 685, 1705.
- Gattacka*—La Salle, 1682, in Margry, Découvertes, II, 201, 1877.
- Gú'ta'k*—La Flesche, Omaha and Ponca name, probably derived from the Pawnee.
- Ka-ta-ka*—Kioway, Kataka, and Towakaro treaty, ratified 1838.
- Kattekas*—French, Hist. Colls. of Louisiana, new series, I, 153, note, 1869.
- Quataquois*—La Harpe, 1719, in Margry, Découvertes, VI, 289.
- Quataquon*—Beaurain, 1719, *ibid.*
- Thá'ká-hině'na* } Mooney, Misc. Ind. MS. Arapaho names, derived from *Gáta'ka*
Thá'ká-itän } and *hině'na*, “people,” or *itā'n*, “tribe.”
- Gĩnā's*—Mooney, Misc. Ind. MS. Wichita name.
- Kántsi*—Mooney, Misc. Ind. MS. Caddo collective name for the Apache tribes, signifying “liars;” hence Caney, etc.
- K'á-pátop*—A generic Kiowa name for several tribes cognate with the Apache, including Apache proper, Mescalero, Lipan, and Kiowa Apache. It signifies “knife-whetters,” or “whetstone people.” The name became obsolete about six years ago in consequence of the death of a Kiowa chief named *K'á-pä'te*.
- Kĩsínāhĩs*—Mooney, Misc. Ind. MS. Kichai name.
- Mútsiānă-tānıu*—Cheyenne name, signifying “whetstone people.”
- Nadıisha-déna*—The name used by themselves, signifying “our people” or “people of our kind;” singular, *Ná-isha*. *Déna*, “people,” is the word which, in the various dialectal forms of *dina*, *tĩné*, *ďĩ'ně*, *túne*, *nde*, etc, enters into so many tribal names of the Athapaskan stock.
- Prairie Apache*—Whitfield in Rept. Comr. of Ind. Aff., 297, 1854.
- Sádalsómte-k'íägo*—Another Kiowa name for the Kiowa Apache, signifying “weasel people.”
- Semät*—The name by which the Kiowa call them, signifying “thieves;” the name which designates this tribe alone, superseded a few years ago the more general term *K á-pä'top*.
- Tagúi*—The old Kiowa name for the Apache tribes generally, superseded for a time by *K á-pä'top*, but now again in use. Cf *T'a'ká-i*, “white man.”
- Tá'gugála*—Hodge, Pueblo MS. Notes, 1895. The Jemez name for the Apache tribes, including the Kiowa Apache.
- Tágukerésh*—Hodge, Pueblo MS. Notes, 1895. The Pecos name for the Apache tribes, including the Kiowa Apache.
- Tashĩn*—Mooney, Misc. Ind. MS. Comanche generic name for the Apache tribes.

TRIBAL SIGN

Right index finger rubbed briskly up and down along the back of left index finger. This is the generic sign for all tribes of Apache connection, including Apache proper, Navaho, Mescalero, Lipan, and Kiowa Apache. It is commonly interpreted to mean "knife whetters" or "whetstone people," and this is also the meaning of the generic term for Apache in most of the plains languages. It is possible, however, that this is a misconception of the original purpose of the sign, which may have had reference to a peculiar musical instrument found in various forms among the Pueblo and other Indians of the southwest. Clark says:

I have heard two distinct conceptions for this gesture, the Cheyenne claiming that the sign came from a peculiar musical instrument made from an elk horn, which produced weird-like sounds by rubbing it backward and forward with a stick, and the second (I do not remember what tribe gave me the conception) from a specially good whetstone which the Apaches made and used (*Clark, 9*).

In a personal letter to the author Grinnell states, on Cheyenne authority, that the sign "is not *whetting a knife*, which would be performed by one open flat hand on back of other flat hand, and not *poor*, which would be passing right forefinger down over back of left forefinger held vertically. The sign is said by the Cheyenne to refer to a musical instrument used in old times by the Apache. This instrument was played by passing the forefinger back and forth over the flat surface of the instrument, from which surface a tongue protruded, which, when struck, vibrated and made the sound, somewhat after the manner of the Jew's-harp."

ORIGIN AND HISTORY

The Kiowa Apache are a small tribe of Athapascan stock, numbering now about two hundred and twenty-five, associated with the Kiowa from the earliest traditional period and forming a component part of the Kiowa tribal circle, although reserving their distinct language; they call themselves *Nadíisha-dena*, "our people." In the early French records of the seventeenth century, in Lewis and Clark's narrative, and in their first treaty, in 1837, they are called by various forms of the name *Gátáka*, the name by which they are known to the Pawnee, although this does not necessarily imply that the word is of Pawnee origin. They are possibly the Kaskaia or "Bad-hearts" of Long in 1820. The Kiowa call them by the contemptuous title of *Semät*, "thieves," a recent substitute for the older generic term *Tagúi*, applied also to other tribes of the same stock. They are now commonly known as Kiowa Apache, under a mistaken impression, arising from the fact of their Athapascan affinity, that they are a detached band of the Apache nation of Arizona. On the contrary, they have never had any political connection with the Apache proper and were probably unaware of their existence until about one hundred years ago. A few Mescalero



PHOTO BY JACKSON, 1892



DAHA, A KIOWA APACHE SUBCHIEF

Apache from New Mexico are now living with them, and individuals of the two tribes frequently exchange visits, but this friendly intimacy is a matter of only sixty or eighty years' standing, resulting from the peace between the Kiowa and Comanche, as already recorded.

They have not migrated from the southwest into the plains country,



Photo by Hayden Survey, 1872

FIG. 58—Gray-eagle, a Kiowa Apache subchief

but have come with the Kiowa from the extreme north, where they lay the scene of their oldest traditions, including their great medicine story. Their association with the Kiowa antedates the first removal of the latter from the mountains, as both tribes say they have no memory of a time when they were not together. It is probable that the Kiowa

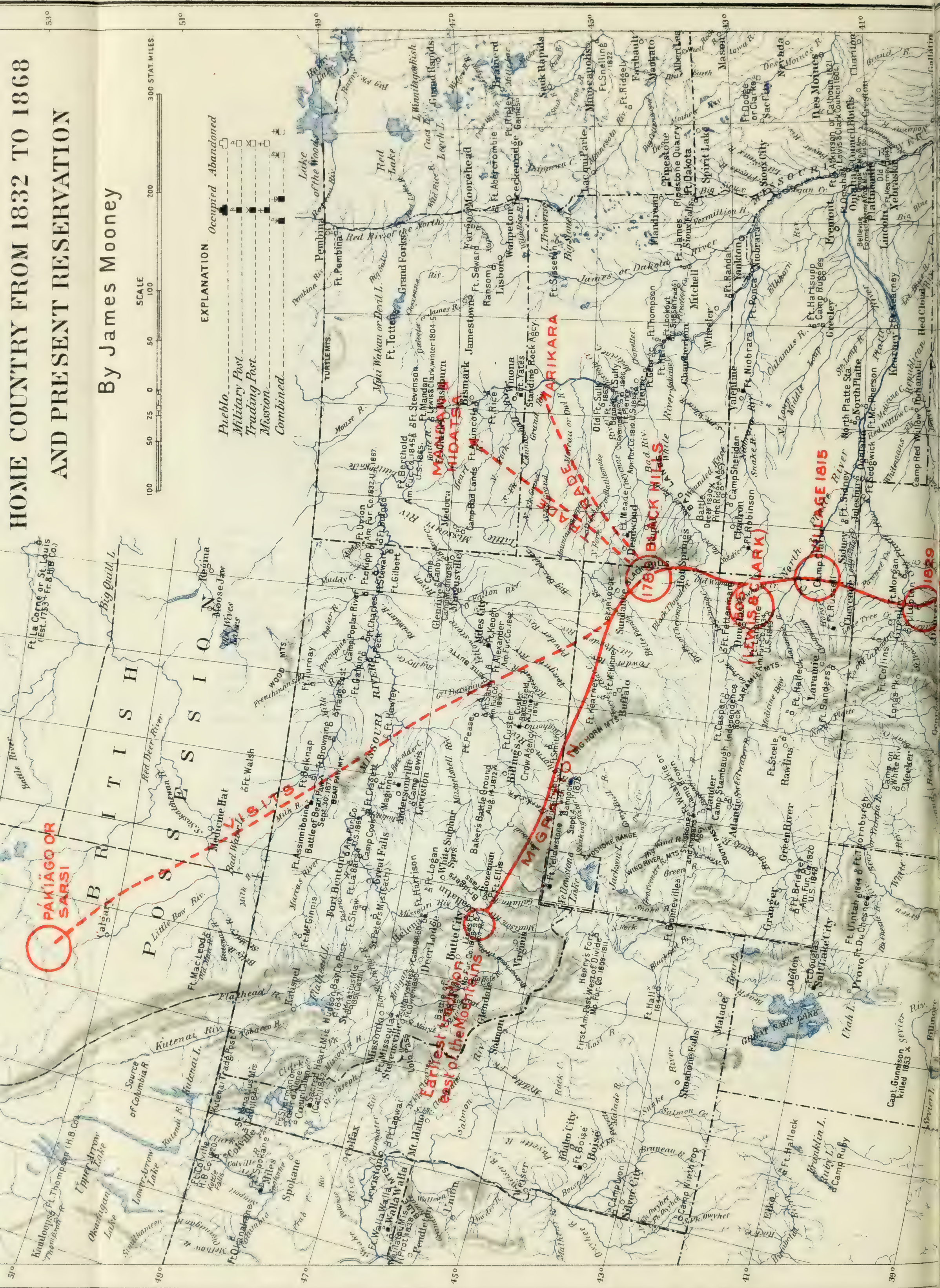
Apache, like the cognate Sarsi, have come down along the eastern base of the Rocky mountains from the great Athapascan hive of the Mackenzie river region instead of along the chain of the Sierras, the line followed by the kindred Tototin, Wailaki, Navaho, and Apache proper, and that, finding themselves too weak to stand alone, they took refuge with the Kiowa, as the Sarsi have done with the Blackfeet.

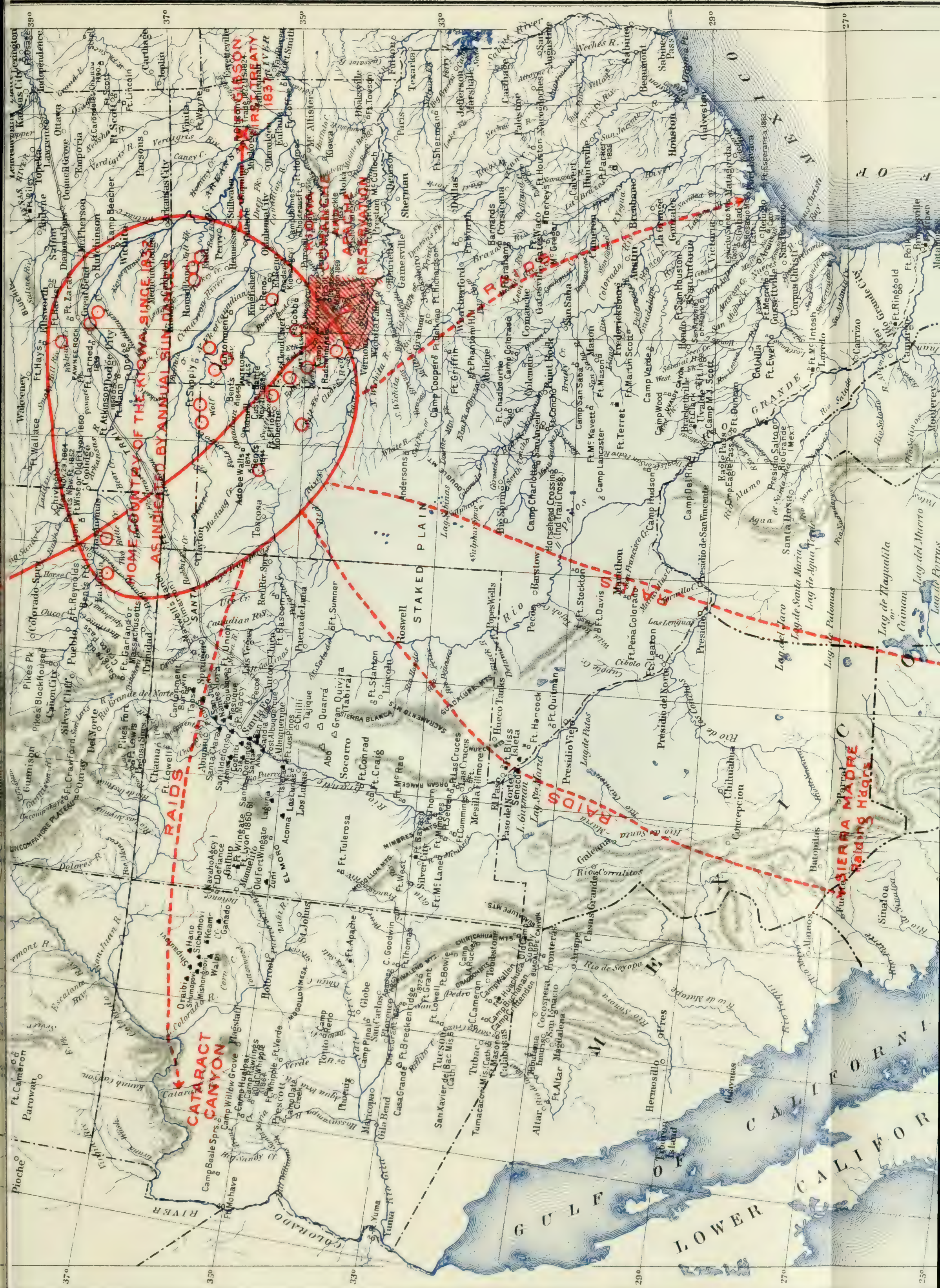
In regard to this northern origin and early association Clark says, in his valuable work on the sign language: "Tradition locates the Kiowas near and to the southwest of the Black Hills, Dakota, and without doubt they had previous to that time lived near the Missouri river. The Apaches with whom they are now associated were at this time with them." In another place he states that an old Apache told him, about 1881, that he was then about seventy years of age and had been born near Missouri river, northeast of the Black Hills (*Clark, 10*). Keim chooses to call them Lipan, in which he is mistaken, the Lipan being still another Athapascan tribe living farther south, and states that "these people are improperly known as Apaches and so called in the official documents of the government. They say of themselves that they are not Apaches, that the Apaches live away to the west." He says that they have a tradition of having formerly lived in the Bad-lands of Dakota, whence they drifted to the south, but adds somewhat naively that there is no other authority for this than their own story (*Keim, 4*).

As the Apache are practically a part of the Kiowa in everything but language, they need no extended separate notice. Curiously enough their authentic history begins nearly seventy years earlier than that of the dominant tribe with which they are associated. They are first mentioned by the French explorer La Salle, in an undated letter of 1681 or 1682, under the name of Gattacka. Writing from a post in what is now Illinois, he says that the Pana (Pawnee) live more than 200 leagues to the west, on one of the tributaries of the Mississippi, and are "neighbors and allies of the Gattacka and Manrhoet, who are south of their villages, and who sell to them horses, which they probably steal from the Spaniards of New Mexico." In another fragmentary letter of 1682, written from the same place, he proposes to make an overland journey by means of horses, "which may easily be had, as there are many with the savages called Pana, Pancassa, Manrhout, Gataea, Panimaha, and Pasos, who lie somewhat remote, it is true, but yet communication with them is very easy by means of the river of the Missouriites, which flows into the river Colbert" (*Margry, 1*). In modern terms Pana, Pancassa (or Paneassa), Gataea (for Gataca), Panimaha, Missouriites, and Colbert are respectively Pawnee, Ponca (?), Kiowa Apache, Pawnee-Maha or———, Missouri, and Mississippi. Paso is problematic, and Manrhoet or Manrhout, which in both letters is mentioned in connection with the Kiowa Apache, may possibly be some obsolete name for the Kiowa themselves.

AND PRESENT PRESERVATION

By James Mooney





From these references it is plain that the Kiowa Apache—and presumably also the Kiowa—ranged even at this early period in the same general region where they were known more than a hundred years

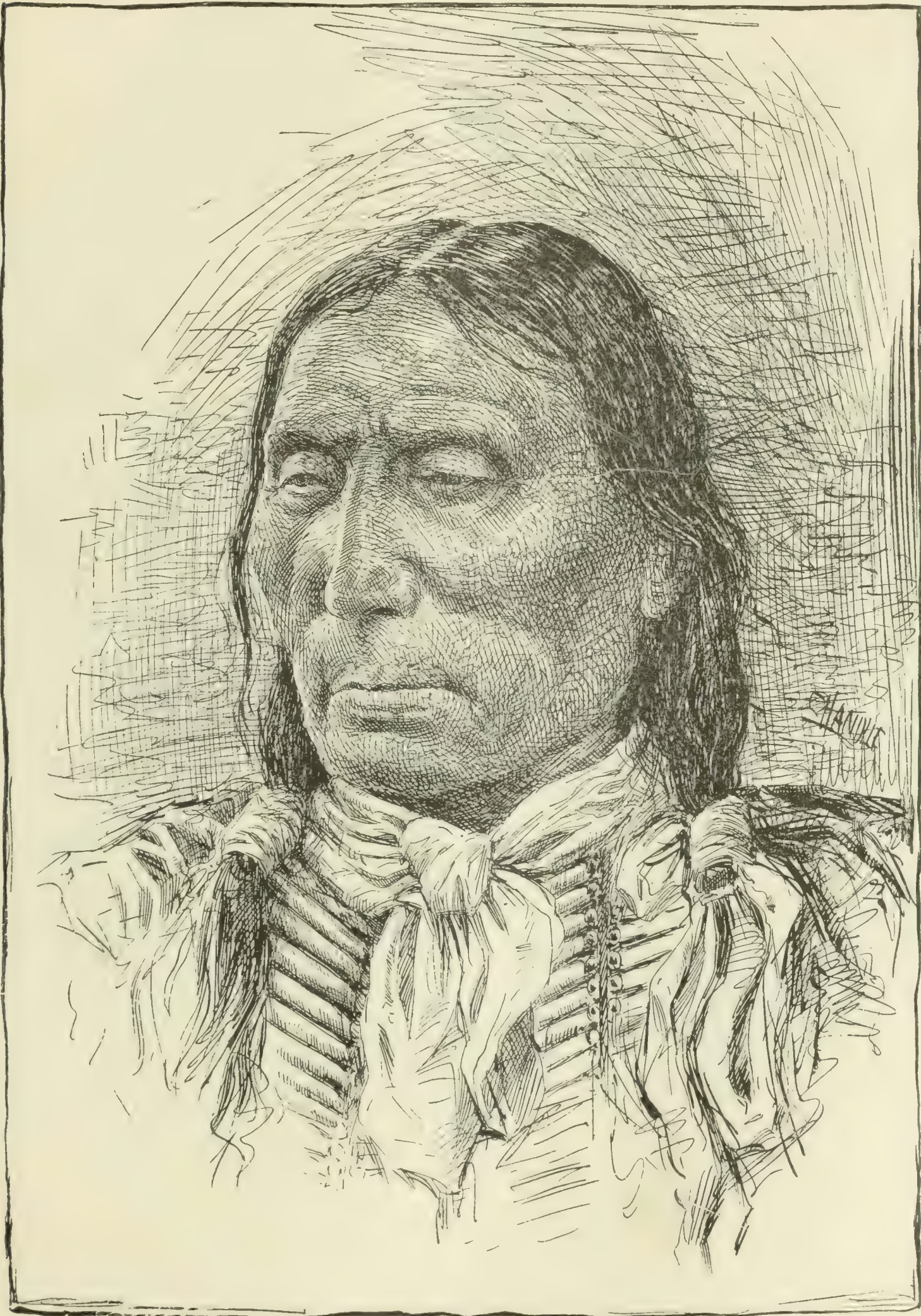


FIG. 59—Tsáyádítl-ti or White-man, present head-chief of the Kiowa Apache

later, namely, between the Platte and the frontiers of New Mexico, and that they already had herds of horses taken from the Spanish settlements. It appears also that they were then in friendship with the

Pawnee. From the fact that they traded horses to the other tribes, and that La Salle proposed to supply himself from them or their neighbors, it is not impossible that they sometimes visited the French fort

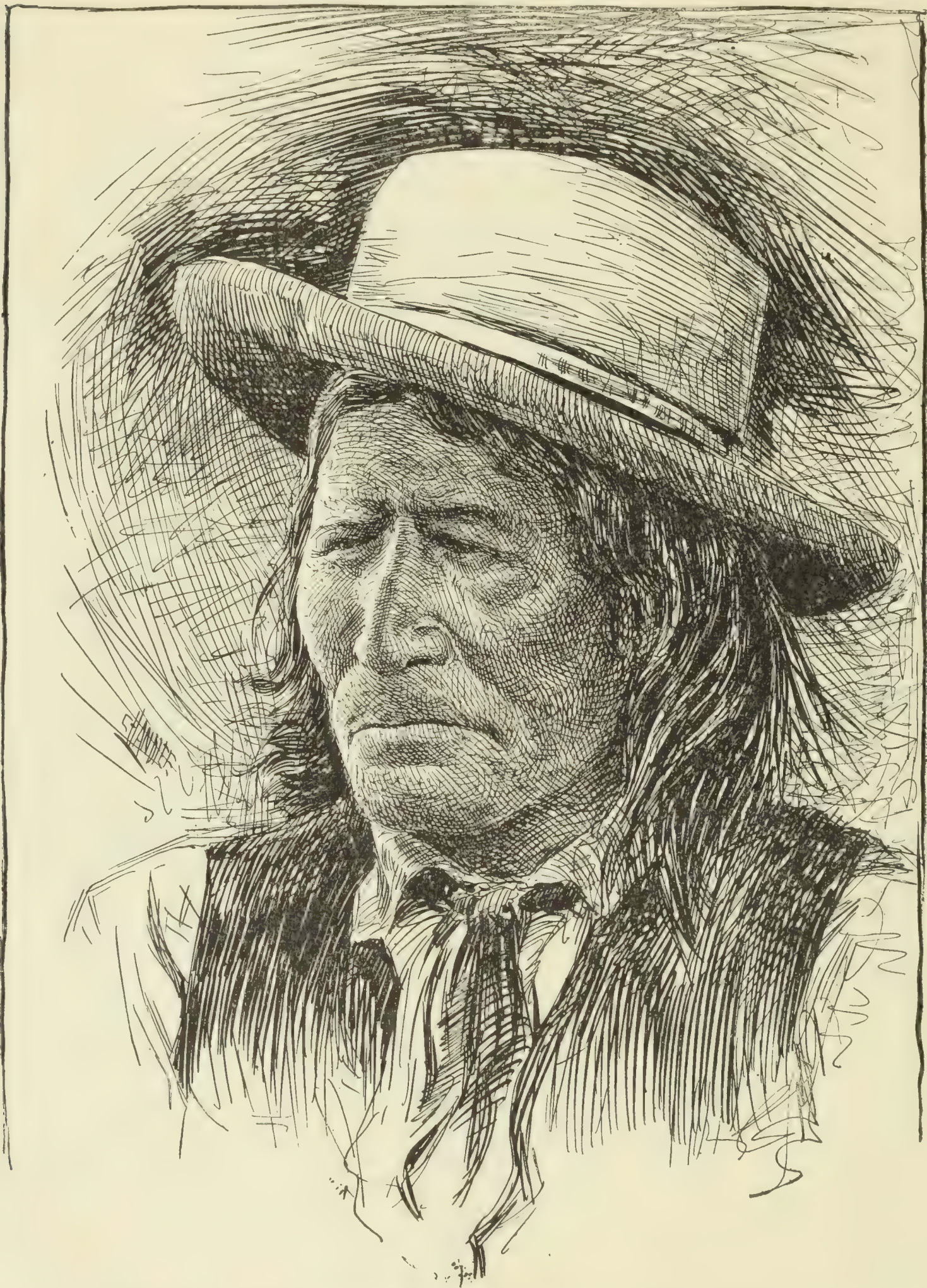


FIG. 60—Dävéko, "The-same-one," a Kiowa Apache subchief and medicine-man

on Peoria lake. On a map in Harris' Collection of Voyages and Travels, published in 1705, we find the "Gataka" marked—probably on the authority of early French documents—on the west side of the Missouri,



PHOTOS BY HILLERS, 1894



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GOÑKOÑ OR APACHE JOHN, A KIOWA APACHE SUBCHIEF

above the Quapaw (see the Kiowa Apache synonymy, page 245). In 1719 La Harpe found them ("Quataquois") living in connection with the Tawákoni and other affiliated tribes in a village which has been identified by Philip Walker, Esquire, of Washington, as situated on the south bank of the Cimarron, near its junction with the Arkansas, in what is now the Creek nation of Indian Territory (*Margry*, 2).

FIRST OFFICIAL AMERICAN NOTICE

The official history of the Apache begins nearly a hundred years later. In 1805 the explorers Lewis and Clark describe the "Ca'takâ," whom they apparently did not meet, as living between the heads of the two forks of Cheyenne river, in the Black Hills region of north-eastern Wyoming, and numbering twenty-five tipis, seventy-five warriors, and three hundred souls. This appears to be a singularly close estimate. The Kiowa lived near them, on the North Platte, and both tribes had the same alliances and general customs. They were rich in horses, which they sold to the Arikara and Mandan, but had no trader among them, and the mouth of Cheyenne river was suggested as a suitable place for the establishment of a trading post for them both (*Lewis and Clark*, 6).

TREATIES

In 1837, in connection with the Kiowa and Tawákoni, they made their first treaty with the government, as has already been described at length in treating of the Kiowa. They are called Kataka in the treaty, this being apparently the last official use of that name, and thenceforth they have been known as Apache. Their subsequent history is that of the Kiowa. In 1853 they are mentioned as a warlike band ranging the waters of Canadian river, in the same great plains occupied by the Comanche, with whom they often joined in raiding expeditions (*Report*, 67).

By the treaty of the Little Arkansas, in 1865, they were officially detached from the Kiowa and attached to the Cheyenne and Arapaho. This was done at the request of the Apache themselves, in consequence of the unfriendly attitude of the Kiowa toward the whites. But the arrangement had no practical force, and by the treaty of Medicine Lodge, in 1867, they were formally reunited to the Kiowa. This latter treaty was signed by six chiefs on behalf of the Apache, Gúañtekána, "Poor-bear," being then their principal chief (see the treaty, *ante*). A part of the Apache continued to live with the Cheyenne and Arapaho until after the readjustment at the close of the outbreak of 1874-75. In keeping with the general conduct of the tribe, they remained peaceable and friendly throughout the trouble (*Report*, 68).

DELEGATION TO WASHINGTON, 1872—FRIENDLY DISPOSITION

They participated with the Kiowa and others in the joint delegation which visited Washington in October, 1872, being represented on that

occasion by Pacer the principal chief, Daho, and Gray-eagle. In his official report Captain Alvord, chairman of the commission which had charge of the delegation, says of the Apache:

The Apache who are in the Indian Territory number about five hundred, are recognized by the supplemental treaty of 1867 as confederated with the Kiowa and Comanche, and have generally been controlled by and acted with the Kiowa. More or less of them have constantly participated in the marauding of the others, but as a tribe or band it is believed that they are better disposed than their associates, and that the professions of friendship which are made by their three principal chiefs, now in Washington, are in good faith, and may be received accordingly. I think that if they can be removed from the evil influences of the Kiowa and Comanche, they will do well (*Report*, 69).

PROGRESS TOWARD CIVILIZATION—DEATH OF PACER, 1875

On the return of the delegation the Apache in good faith commenced to learn the ways of civilization and to earn their own living. Their agent reports:

The Apache were very attentive, working themselves with the hoe. Apache John, a chief, is especially deserving of mention. He worked hard, had all the weeds hoed out, and in addition to his corn has a fine crop of watermelons, some of which he brought me as a present. It was a very nice sight to see one who a few months ago was regarded as a wild and dangerous man drive up in his wagon (I had given him one) and unload from it a number of fine melons of his own cultivation and raising (*Report*, 70).

The next year, 1874, started out with even more encouraging prospects. The Apache chiefs worked in their own fields as an example to their people, and at the request of Pacer a school was established among them by A. J. Standing, who, like Battey and Haworth, was a Quaker. All went well until summer, when the Cheyenne, Comanche, and a part of the Kiowa took up arms in defense of their hunting grounds, as already narrated, more or less involving the other tribes, and putting a complete stop to the work of civilization. By direction of the agent the Apache, at the beginning of the trouble, repaired to the friendly camp at Fort Sill, where during all the disturbance they maintained their loyalty and kept the peace, and afterward used their good offices to bring about the surrender of the hostiles, as they had done previously in 1869 (*Report*, 71).

Pacer, head chief of the Apache, died in the summer of 1875. He was a man of considerable ability and is frequently mentioned in the official reports of the period, as well as by Battey. He had been the consistent advocate of friendly relations with the whites, and on his death was given a civilized burial, at the request of his people, as had been done in the case of Kicking-bird, the Kiowa chief, who died shortly before (*Report*, 72).

RECENT HISTORY AND PRESENT CONDITION

The Apache participate with the Kiowa and Comanche in the benefits of the leases of grass lands. They suffered terribly in the epidemic of

1892, losing more than one-fourth of their number. They joined in the protest against the late unratified agreement and were represented in the joint delegation of 1894 by Goñkoñ, "Stays-in-tipi," or Apache John. In dress, customs, and general characteristics they resemble the Kiowa, but are much more agreeable and reliable in disposition. They join with them in the sun dance and the peyote rite, and have no distinct tribal ceremony of their own, although they have a "horse medicine" of considerable repute. In 1896 they numbered two hundred and eight, under the head chieftainship of White-man, and resided chiefly on Apache creek and in the vicinity of the Kichai hills.

POPULATION

Below is given the population of the Apache at different periods, all but the first estimate (*Lewis and Clark, 6*) being taken from the annual Indian reports. They have probably never numbered much over three hundred and fifty:

1805—Ca'takâ, 25 tipis, 75 warriors, 300 souls.	1877—343.
1850—50 lodges (= 325 souls?).	1878—344.
1854—40 lodges (Fitzpatrick); 320 (Whitfield, Report of 1855).	1879—315.
1865—500 (Report), 40 lodges, with 4 or 5 to a lodge (Leavenworth, in Report on Condition of Indian Tribes, 37, 1867).	1880—334.
1867—800 (?), 70 tipis, 420 souls (estimate in report of Medicine Lodge treaty—Indian Miscel.).	1881—337.
1868—Same.	1882—340.
1869—300 (Report of 1870).	1883—337.
1870—Same.	1884—308.
1871—378.	1885—319.
1872—380 ^a ; 517 ^b .	1886—332.
1873—774 (?).	1887—Same.
1874—602 (?).	1888—348.
1875—344.	1889—349; "a very careful census."
1876—325.	1890—326.
	1891—325.
	1892—241 (decrease from epidemic).
	1893—224.
	1894—Same, taken from preceding.
	1895—226.
	1896—208.

THE ANNUAL CALENDARS, 1833-1892

WINTER 1832-33

Á'dal-há'ngya Áhagyü-de Sai, "Winter that they captured the money." The first event recorded occurred about New Year, in the winter of 1832-33, being an encounter with a small party of Americans,



FIG. 61—Sét-t'án or Little-bear

resulting in the death of *Gúi-kôngya*, "Black-wolf," and the capture of a large quantity of silver coin. The winter is indicated according to the regular system by a black bar below the principal figure, which





AR, (FROM THE NATIVE DRAWING)

is that of a man with the picture of a black wolf over his head and joined to it by a line. The breechcloth shows the figure to be that of a man, the black wolf connected by a line expresses his name, while the red spot with blood gushing from it between the shoulders shows that he was shot through the body. Beside it is a very good picture of a silver dollar to indicate the money captured. This last does not appear on the Dohásän calendar, although the capture gives name to the winter.

According to the Kiowa story, a war party led by Tónp'ódal-kyä'tó, "Lame-old-man," met a small train in charge of a few Americans close to South Canadian river (*Gúădal P'a*, "Red river"), a short distance below the entrance of a southern creek, which they call *T'ä'ñpeü' P'a*, "Skunkberry-bush river," about opposite the present town of Lathrop, in the panhandle of Texas. They call Americans *Hâñpóko*, "Trappers," for the reason that the first Americans known to the tribe were trappers. Texans are considered as of a different nation, and are distinguished as *Tehü'neko* from the Spanish *Tejano*. In this instance the Americans were traveling eastward, and as the place was remote from any regular trail the Indians were at a loss to know why the whites were there. The Kiowa attacked the train, killed several of the party, and captured the money, with the loss to themselves of but one man, Gúi-kóngya. They found a few coins upon the ground, but this being the first money they had ever seen, they did not know its proper use, and so beat the coins into disks to be fastened to straps worn attached to the scalp lock, and hanging down behind (hence the name for money, *â'dal-hâñ'gya*, literally "hair metal"). After leaving the place they met some Comanche, who already knew the use of money, and on hearing the story told them the value of the silver pieces, upon which the Kiowa returned and searched until they succeeded in finding a large quantity. From this it appears that whatever trade the Kiowa had previously carried on with the Spanish settlements had been by barter in kind, as was usual along the Indian frontier in the early days. This was some time before the beginning of regular intercourse with Americans.

Gregg, the author of a most valuable account of the early Santa Fé trade, passed over the same ground a few years later and gives full details of the affair with its tragic sequel. His description of the loca-



FIG. 62—Winter 1832-33—Money captured

tion agrees with the Indian statement, and his account explains also how the whites happened to be traveling in such an unfrequented place. The Kiowa statement was obtained without any reference to Gregg.

It was somewhere in this vicinity that a small party of Americans experienced a terrible calamity in the winter of 1832-3 on their way home, and as the incident had the tendency to call into play the most prominent features of the Indian character, I will digress so far here as to relate the facts.

The party consisted of twelve men, chiefly citizens of Missouri. Their baggage and about ten thousand dollars in specie was packed upon mules. They took the route of the Canadian river, fearing to venture on the northern prairies at that season of the year. Having left Santa Fé in December, they had proceeded without accident thus far, when a large body of Comanches and Kiowas were seen advancing towards them. Being well acquainted with the treacherous and pusillanimous disposition of these races, the traders prepared at once for defence; but the savages, having made a halt at some distance, began to approach one by one or in small parties, making a great show of friendship all the while, until most of them had collected on the spot. Finding themselves surrounded in every direction, the travelers now began to move on in hopes of getting rid of the intruders, but the latter were equally ready for the start, and mounting their horses kept jogging on in the same direction. The first act of hostility perpetrated by the Indians proved fatal to one of the American traders named Pratt, who was shot dead while attempting to secure two mules which had become separated from the rest. Upon this the companions of the slain man immediately dismounted and commenced a fire upon the Indians, which was warmly returned, whereby another man of the name of Mitchell was killed. By this time the traders had taken off their packs and piled them around for protection, and now falling to work with their hands they very soon scratched out a trench deep enough to protect them from the shot of the enemy. The latter made several desperate charges, but they seemed too careful of their own personal safety, notwithstanding the enormous superiority of their numbers, to venture too near the rifles of the Americans. In a few hours all the animals of the traders were either killed or wounded, but no personal damage was done to the remaining ten men, with the exception of a wound in the thigh received by one, which was not at the time considered dangerous.

During the siege the Americans were in great danger of perishing from thirst, as the Indians had complete command of all the water within reach. Starvation was not so much to be dreaded, because in case of necessity they could live on the flesh of their slain animals, some of which lay stretched close around them. After being pent up for thirty-six hours in this horrible hole, during which time they had seldom ventured to raise their heads above the surface without being shot at, they resolved to make a bold sortie in the night, as any death was preferable to the death which awaited them there. As there was not an animal left that was at all in a condition to travel, the proprietors of the money gave permission to all to take and appropriate to themselves whatever amount each man could safely undertake to carry. In this way a few hundred dollars were started with, of which, however, but little ever reached the United States. The remainder was buried deep in the sand, in hopes that it might escape the cupidity of the savages, but to very little purpose, for they were afterward seen by some Mexican traders making a great display of specie, which was without doubt taken from this unfortunate cache.

With every prospect of being discovered, overtaken, and butchered, but resolved to sell their lives as dearly as possible, they at last emerged from their hiding place and moved on silently and slowly until they found themselves beyond the purlieus of the Indian camps. Often did they look back in the direction where from three to five hundred savages were supposed to watch their movements, but much to their astonishment no one appeared to be in pursuit. The Indians, believing, no doubt, that the property of the traders would come into their hands, and having no ama-

teur predilection for taking scalps at the risk of losing their own, appeared willing enough to let the spoliated adventurers depart without further molestation.

The destitute travelers having run themselves short of provisions, and being no longer able to kill game for want of materials to load their rifles with, they were very soon reduced to the necessity of sustaining life upon the roots and the tender bark of trees. After traveling for several days in this desperate condition, with lacerated feet and utter prostration of mind and body, they began to disagree among themselves about the route to be pursued, and eventually separated into two distinct parties. Five of these unhappy men steered a westward (*sic*) course, and after a succession of sufferings and privations which almost surpassed belief, they reached the settlements of the Creek Indians, near the Arkansas river, where they were treated with great kindness and hospitality. The other five wandered about in the greatest state of distress and bewilderment, and only two finally succeeded in getting out of the mazes of the wilderness. Among those who were abandoned to their fate and left to perish thus miserably, was a Mr Schenck, the same individual who had been shot in the thigh, a gentleman of talent and excellent family connections, who was a brother, as I am informed, of the Honorable Mr Schenck, at present a member of congress from Ohio (*Gregg, 2*).

The Kiowa had undoubtedly attacked the traders, believing them to be their enemies the Texans, instead of Americans, as the place was outside of what were then the limits of the United States, and over a hundred miles from the trail usually traveled by the American traders to Santa Fé. This is apparent from Gregg's experience in 1839 in nearly the same place. While proceeding up the Canadian with an escort of dragoons they fell in with a large party of Comanche, and after a doubtful preliminary talk, in which the Comanche very pointedly refused to smoke the proffered pipe, the officer began to speak of the advantages of peace and friendship, and invited some of their headmen to visit the great chief at Washington and make a treaty.

But they would not then converse on the subject. In fact, the interpreter inquired, "Are we not at war? How, then, can we go to see the *Capitan Grande*?" We knew they believed themselves at war with Mexico and Texas, and probably had mistaken us for Texans. . . . Upon this we explained to them that the United States was a distinct government and at peace with the Comanche. On this explanation the chiefs said they were glad to see Americans in their country and hoped more of them would come (*Gregg, 3*).

SUMMER 1833

Imk'ódaltä-dé Pai, "Summer that they cut off their heads." This picture commemorates one of the most vivid memories of the older men of the tribe—a wholesale massacre by the Osage, who cut off the heads of their victims and deposited them in buckets upon the scene of the slaughter. Set-t'an, the author of the calendar, was born in this summer. The picture of a severed head with bloody neck and a bloody knife underneath is sufficiently suggestive. The absence of the usual figure of the sun-dance lodge shows that no dance was held this summer, owing to the fact that the Osage captured the *taine* medicine at the same time. The massacre occurred just west of a mountain called by the Kiowa *K'ódaltä K'op*, "Beheading mountain,"

on the headwaters of Otter creek, not 2 miles northwest from Saddle mountain and about 25 miles northwest from Fort Sill.

It was in early spring and the Kiowa were camped at the mouth of Rainy-mountain creek, a southern tributary of the Washita, within the present limits of the reservation; nearly all the warriors had gone against the Ute, so that few, excepting women, children, and old men, were at home. One morning some young men going out to look for horses, discovered signs of Osage and immediately gave the alarm. According to one story, they found a buffalo with an Osage arrow sticking in it; according to T'ébodal and other old men, they came upon the Osage themselves and exchanged shots, wounding an Osage, but with the loss of one of their own men killed. On the alarm being given, the Kiowa at once broke camp in a panic and fled in four parties in different directions—one party toward the west, another toward the east, and two other bands, among whom was T'ébodal, then a boy, went directly south toward the Comanche. Three of these escaped, but the fourth, under A'dáte, "Island-man," thinking the pursuit was over, stopped on a small tributary of Otter creek, just west of the mountain.



FIG. 63—Summer
1833— They cut
off their heads

Early in the morning, almost before it was yet light, a young man (whose grandson was present during T'ébodal's narration) went to look for his ponies, when he saw the Osage creeping up on foot. He hastily ran back with the news, but all the camp was still sleeping, except the wife of the chief A'dáte, who was outside preparing to scrape a hide. Entering the tipi, he roused the chief, who ran out shouting to his people, "*Tsó bātsó! Tsó bātsó!*"—To the rocks! To the rocks! Thus rudely awakened, the Kiowa sprang up and fled to the mountain, the mothers seizing their children and the old men hurrying as best they could, with their bloodthirsty enemies close behind. The chief himself was pursued and slightly wounded, but got away; his wife, Sémätmä, "Apache-woman," was taken, but soon afterward made her escape. One woman fled with a baby girl on her back and dragging a larger girl by the hand; an Osage pursuing caught the older girl and was drawing his knife across her throat when the mother rushed to her aid and succeeded in beating him off and rescued the child with only a slight gash upon her head. A boy named Äyä, "Sitting-on-a-tree" (?), was saved by his father in about the same way, and is still alive, an old man, to tell it. His father, it is said, seized and held him in his teeth, putting him down while shooting arrows to keep off the pursuers, and taking him up again to run. A party of women was saved by a brave Pawnee living in the camp, who succeeded in fighting off the pursuers long enough to enable the women to reach a place of safety.

The warriors being absent, the Kiowa made no attempt at a stand; it was simply a surprise and flight of panic-stricken women, children,

and old men, in which everyone caught was butchered on the spot. Two children were taken prisoners, a brother and sister—about 10 and 12 years of age, respectively—of whom more hereafter. The Kiowa lost five men killed and a large number of women and children; none of the Osage were killed, as no fight was made. When the massacre was ended, the enemy cut the heads from all the dead bodies, without scalping them, and placed them in brass buckets, one head in each bucket, all over the camp ground, after which they set fire to the tipis and left the place. When the scattered Kiowa returned to look for their friends, they found the camp destroyed, the decapitated bodies lying where they had fallen, and the heads in the buckets as the Osage had left them. The buckets had been obtained by the Kiowa from the Pawnee, who procured them on the Missouri and traded them to the southern tribes. For allowing the camp to be thus surprised the chief, A'dáte, was deposed, and was superseded by Dohá, or Doháte, "Bluff," better known as Dohásän, who thenceforth ruled the tribe until his death, thirty-three years later.

Among the victims of the massacre was a Kiowa chief who had been present the previous winter at the attack on the American traders. His friends buried with him a quantity of silver dollars which had formed his share of the spoil on that occasion. An old woman, the last remaining person who knew the place of sepulture, died a few years ago.

In this affair the Osage also captured the *taíme* medicine, already described, killing the wife of the *taíme* keeper as she was trying to unfasten it from the tipi pole to which it was tied; her husband, An-só te, escaped. In consequence of this loss, there was no sun dance for two years, when, peace having been made between the two tribes, as will be related farther on, the Kiowa visited the Osage camp, somewhere on the Cimarron or the Salt fork of the Arkansas, and recovered it, afterward giving a horse in return for it. Dohásän, who conducted the negotiations, asked the Osage about it and offered a pinto pony and several other ponies for it. The Osage said that they had it, and went home and brought it, but in token of their friendship refused to accept more than a single pony in return. On this occasion both *taíme* images were captured, together with the case in which they were kept.

Two points in connection with this massacre deserve attention. First, the Osage war party was on foot; this, as the Kiowa state, was the general custom of the Osage and Pawnee, more especially the latter, who are sometimes called *Domáñk'üigo*, "Walkers," by the Kiowa, and was occasionally followed by other tribes, including also the Kiowa. Grinnell states that the Blackfeet always went to war on foot (*Grinnell, Blackfeet*, 2). There was an obvious advantage in the practice, as a foot party could more easily travel and approach a hostile camp without attracting observation, relying on themselves to procure horses to enable them to return mounted. T'ébodai, when a young man, was twice a member of a large Kiowa war party which went out

on foot. The Kiowa say that the Pawnee in particular went afoot on war expeditions, and more recently when they visited other tribes for the purpose of a social dance, in the latter case always returning with large numbers of ponies given them by their entertainers (see summer 1851 and winter 1871-72). Gregg says that small war parties of the Pawnee were accustomed to rove on foot through every part of the plains, even to the Mexican frontier, but generally returning mounted on captured horses. When, on one occasion, his train was attacked upon the upper Canadian, he says:

It was evidently a foot party, which we looked upon as another proof of their being Pawnees, for these famous marauders are well known to go forth upon their expeditions of plunder without horses, although they seldom fail to return well mounted (*Gregg, 4*).

Dunbar says that Pawnee runners have been known repeatedly to travel over 100 miles in twenty-four hours or less, going at a swinging trot, without stopping on the way for sleep or food (*Clark, 11*).

Secondly, it is to be noted that the Osage beheaded the Kiowa without scalping them. This, the Kiowa say, was a general Osage practice; in fact, according to the Kiowa, the Osage never scalped their enemies, but cut off the heads and left them unscalped upon the field. They kept tally of the number killed, however, and when an Osage warrior had killed four he painted a blue half circle, curving downward, upon his breast. So far as Kiowa knowledge goes, no other tribe of the plains practiced the custom of beheading, but all of them scalped their enemies. It seems certain, however, that the Dakota at an early period had the same custom, as they are called "Beheaders" in several Indian languages, while their name is indicated in the sign language by drawing the hand across the throat to signify the same thing. Clark says:

In former times the Sioux Indians, if they had time, cut off the heads of their slain enemies and took them to their first camp after the fight, where the entire scalp was taken off. To make it particularly fine, they kept on the ears with the rings and ornaments. In case a woman had lost some of her kin by death, and her heart was, as they say, *bad*, she was at times allowed to go with the war party, remaining in the camp established near the point of attack. The head of a slain foe would be given to her, and after removing the scalp she would make her heart *good* by smashing the skull with a war club (*Clark, 12*).

Among other tribes, as well as the Osage, especially in the north, the number of enemies slain or other brave deeds performed was sometimes indicated by the style of body paint or dress adornment. Among the Kiowa the number of transverse stripes upon a woman's legging indicates the scalps or *coups* won by some warrior kinsman.

WINTER 1833-34

D'ä'-p'ë'gyä-de Sai, "Winter that the stars fell." This winter takes its name from the memorable meteoric display which occurred shortly before daylight on the morning of November 13, 1833. It was observed throughout North America, and created great excitement among the

plains tribes, as well as among a large part of our own population; the event is still used as a chronologic starting point by the old people of the various tribes. It is pictorially represented on most of the Dakota calendars discussed by Mallery in his valuable work on the Picture Writing of the American Indians. Set-t'an was born in the preceding summer, and the small figure of a child over the winter bar indicates that this is his first winter or year; the stars above his head represent the meteors.

The Kiowa say it occurred in the winter season, when they were camped on a small tributary of Elm fork of Red river, within the present Greer county, Oklahoma. The whole camp was asleep, when they were awakened by a sudden light; running out from the tipis, they found the night as bright as day, with myriads of meteors darting about in the sky. The parents aroused the children, saying, "Get up, get up, there is something awful (*zédälbe*) going on!" They had never before known such an occurrence, and regarded it as something ominous or dangerous, and sat watching it with dread and apprehension until daylight. Such phenomena are always looked upon as omens or warnings by the ignorant; in Mexico, according to Gregg, it was believed to be a sign of divine displeasure at a sacrilegious congress which had recently curtailed the privileges of the church, while in Missouri it was regarded by some as a protest from heaven against the persecution of the Mormons then gathered near Independence (*Gregg, 5*).



FIG. 65—The star shower of 1833 (from the Dakota calendars)

massacre of the preceding summer. The tipi above the female figure, with which it is connected by a line, indicates her name, Gunpä'ñdamä, Medicine-tied-to-tipi-pole(-woman) (see the glossary, *Gunpä'ñdamä*). She was restored to her friends by a detachment of the First dragoons from Fort Gibson. Although this occurred in the summer, the season is not indicated by the usual figure of the medicine lodge, for the reason that, the *taíme* being still in possession of the Osage, there was no sun dance held that year. It is omitted also in the picture for the preceding summer, the *taíme* having been captured early in the spring.

As the return of this girl was the object of the first American expedition up Red river, and the beginning of our official and trading relations with the Comanche, Kiowa, Wichita, and affiliated tribes, it merits somewhat extended



FIG. 64—Winter 1833-34—The stars fell

SUMMER 1834

The figure is intended to commemorate the return of the girl captured by the Osage in the



FIG. 66—Summer 1833-34—Return of Gunpä'ñdamä

notice. The expedition and subsequent council are noted in the report of the Commissioner of Indian Affairs for 1834 (page 240), and are described at length in the journal of Lieutenant Wheelock (*Greer, 1*), and in the letters of the artist Catlin, who accompanied the party and painted the first pictures ever made of any of these tribes. The resulting treaties of 1835 and 1837 are noted in the Commissioner's reports for these years (*Report, 74*). The first Indian story of the occurrence is here given:

After the massacre at *K'ódaltä K'op*, already described, the Osage returned to their own country, where there was a soldier camp (i. e., Fort Gibson), bringing with them the Kiowa girl *Gunpä'ñdamä* (Medicine-tied-to-tipi-pole) and her brother, taken at the time of the massacre. The woman captured at the same time had escaped and made her way back to her people. At Fort Gibson the soldiers told the Osage that as they and other Kiowa were all alike Indians they should be friends. They then bought the two captive children from the Osage and proposed that some of the Osage should return with them (the soldiers) to the Kiowa country, there to give back the children to their friends and invite the Kiowa to come down to the fort and make a permanent treaty of peace and friendship between the two tribes. The Osage agreed, and accordingly a large party of soldiers, accompanied by a number of Osage, with the girl *Gunpä'ñdamä*, set out for the Kiowa country. The little boy had been killed by a sheep before starting. With them went also the famous trader, Colonel Auguste Chouteau, called "Soto" by the Kiowa, the first American trader known to the Kiowa, Wichita, and associated tribes. Up to this time the Kiowa had been at war with the Osage and had no knowledge of our government, and these dragoons were the first United States troops they had ever seen. The soldiers first met the Comanche, who told them that the Kiowa were near the Wichita village at the farther end of the mountains. When the troops arrived at the village, the Kiowa were afraid and kept at a distance until they saw the girl, which convinced them that the soldiers were their friends. The girl was given back to her people, and at the request of the soldiers a number of Kiowa, including the head chief, *Doháte*, returned with them and the Osage to the camp at Fort Gibson. They do not remember whether any of the Apache went. There the soldiers entertained the Kiowa with food, coffee, and sugar, and gave them blankets and other presents. A treaty of peace was made between the Kiowa and soldiers (i. e., Americans), and the Osage and other Kiowa were invited to trade with Chouteau, who promised to bring goods to their country. Since that time the two tribes have been friends. Hitherto the Kiowa had never had any traders in their country, but after this peace a regular trade was established. The first trader, whom they call *Tóme* or *Tóme-te* (Thomas?) came soon afterward and built a trading post on the west side of Cache creek, about 3 miles below the present Fort Sill; but he did not stay long.

Dohá, Doháte, or Dohásän (Bluff or Little-bluff), the head of the tribe at the time of this expedition, had superseded A'dáte, who had been deposed as a punishment for having allowed his people to be surprised and massacred by the Osage. In his youth Dóha had been known as Äanóñte. He was the fourth head chief of the tribe from the time of the treaty with the Comanche, the order of succession being Políäkyä (Harelip), alias Kágiätsé (Thick-blanket); Tsónbohón (Feather-cap), A'dáte, and Dohásän. He continued to be recognized as head chief until his death in 1866. The name is hereditary in the family, which is one of the most prominent in the tribe, and has been borne by this chief—distinguished as Old Dohásän—by his nephew, who died at an advanced age at Anadarko in the winter of 1893-94, and by his son. The older men state that the father of the great Dohásän was also called Dohá, and that his son, after assuming the same name, was known as Dohásän, (Little-bluff) for distinction. He is spoken of as Doháte as frequently as Dohásän.

According to one informant, at the time of the Osage massacre Chouteau had a trading post about a day's journey east of the present Fort Sill, and the Kiowa went to him and told him of their misfortune, whereupon he went to Fort Gibson and induced the soldiers to rescue the captives from the Osage and return them to their friends. This is perhaps a confusion of events. The trading post referred to was at Chouteau spring, on the east side of Chouteau creek which flows into the South Canadian from the east, about 5 miles northeast of the present town of Purcell, Indian Territory. It does not appear, however, to have been established until after, and as a result of, this expedition.

The expedition is described in detail by the artist Catlin, who accompanied it and was present at the council on its return. As the Comanche, Kiowa, and Wichita lived so remote from the frontiers, they had not yet been brought into official connection with the United States, and consequently had several times, as we have seen, come into collision with small parties of Americans on the borders of their country. The government had for some time been desirous of entering into treaty relations with them, more especially as the plan of colonizing the eastern tribes in the western country had been put into operation. As the Osage, who were already in treaty relations with the government, had several captives taken from the more western tribes, it was decided to purchase these prisoners and send them home under military escort as a token of the friendly intentions of the government, with an invitation to the chiefs of those tribes to come to the military post and make a treaty with the United States, the Osage, and the immigrant tribes.

Accordingly, the two Kiowa children and two Wichita children, captives, were purchased from the Osage and brought to Fort Gibson; unfortunately, the little Kiowa boy was killed near the post shortly after by a blow from a ram. An expedition of the First dragoons was organized, under command of General Leavenworth, to restore the children to

their parents and open communication with their tribes. The troops, numbering about four hundred, left Fort Gibson toward the end of June, 1834, taking with them the three children and accompanied by about thirty of the Osage, Cherokee, Delaware, and Seneca tribes, together with the artist Catlin, and, according to the Indian account, Chouteau and perhaps another trader. Their interpreter was a Cherokee with a "very imperfect" knowledge of Spanish, through which language he hoped to open communication with Spanish-speaking Indians among the tribes visited; his ignorance probably accounts for the atrocious names and etymologies given by Catlin. The march in the heat of summer proved so severe that by the time the command reached the junction of Washita and Red rivers about one third of the number, including the commanding general, were prostrated; the remainder, constantly dwindling,



FIG. 67 -Meeting of the dragoons and the Comanche (after Catlin)

pushed on in charge of Colonel Henry Dodge, keeping a general northwest course along the divide between the two streams. They were considered to be within the Comanche country after crossing the Washita.

Having traveled about two weeks, they one day discovered a large party of Comanche several miles ahead, sitting quietly on their horses watching the movements of the advancing troops, and holding their long lances in their hands, the blades glistening in the sun. As the cavalry advanced toward them the Indians retreated to another ridge. This was repeated several times, until at last, says Catlin—

Colonel Dodge ordered the command to halt, while he rode forward with a few of his staff and an ensign carrying a white flag. I joined this advance, and the Indians stood their ground until we had come within half a mile of them and could distinctly observe all their numbers and movements. We then came to a halt, and the

white flag was sent a little in advance and waved as a signal for them to approach, at which one of their party galloped out in advance of the war party on a milk-white horse, carrying a piece of white buffalo skin on the point of his long lance in reply to our flag. . . . The distance between the two parties was perhaps half a mile, and that a beautiful and gently sloping prairie, over which he was for the space of a quarter of an hour reining and spurring his maddened horse and gradually approaching us by tacking to the right and left like a vessel beating against the wind. He at length came prancing and leaping along till he met the flag of the regiment, when he leaned his spear for a moment against it, looking the bearer full in the face, when he wheeled his horse and dashed up to Colonel Dodge with his extended hand, which was instantly grasped and shaken. We all had him by the hand in a moment, and the rest of the party seeing him received in this friendly manner, instead of being sacrificed, as they undoubtedly expected, started under full whip in a direct line toward us, and in a moment gathered like a black cloud around us. . . . The warrior's quiver was slung on the warrior's back, and his bow grasped in his left hand ready for instant use if called for. His shield was on his arm; and across his thigh, in a beautiful cover of buckskin, his gun was slung, and in his right hand his lance of fourteen feet in length. Thus armed and equipped was this dashing cavalier, and nearly in the same manner all the rest of the party (*Catlin, 4*).

When the purpose of the expedition had been explained to them, the Comanche said that their great village was a few days farther ahead, and abandoning their war expedition, they turned and escorted the troops to their camp. According to statements made by old men of the tribe to Horace P. Jones, post interpreter at Fort Sill, this Comanche village in 1834 was situated on Chandler creek, close to its junction with Cache creek, about ten miles north of the present Fort Sill. The artist gives a glowing account of the surrounding country and of their reception by the Comanche.

Having led us to the top of a gently rising elevation on the prairie, they pointed to their village at several miles distance, in the midst of one of the most enchanting valleys that human eyes ever looked upon. The general course of the valley is from northwest to southeast, of several miles in width, with a magnificent range of mountains rising in distance beyond, it being without doubt a huge spur of the Rocky mountains, composed entirely of a reddish granite or gneiss, corresponding with the other links of this stupendous chain. In the midst of this lovely valley we could just discern amongst the scattering shrubbery that lined the banks of the water courses, the tops of the Comanche wigwams and the smoke curling above them. The valley for a mile distant about the village seemed speckled with horses and mules that were grazing in it. The chiefs of the war party requested the regiment to halt until they could ride in and inform their people who were coming. We then dismounted for an hour or so, when we could see them busily running and catching their horses, and at length several hundreds of their braves and warriors came out at full speed to welcome us, and forming in a line in front of us, as we were again mounted, presented a formidable and pleasing appearance. As they wheeled their horses, they very rapidly formed in a line and dressed like well-disciplined cavalry. The regiment was drawn up in three columns, with a line formed in front, by Colonel Dodge and his staff, in which rank my friend Chadwick and I were also paraded, when we had a fine view of the whole manœuvre, which was picturesque and thrilling in the extreme.

In the center of our advance was stationed a white flag, and the Indians answered to it with one which they sent forward and planted by the side of it. The two lines were thus drawn up face to face within 20 or 30 yards of each other, as inveterate

foes that never had met; and to the everlasting credit of the Comanches, whom the world had always looked upon as murderous and hostile, they had all come out in this manner, with their heads uncovered, and without a weapon of any kind, to meet a war party bristling with arms and trespassing to the middle of their country. They had every reason to look upon us as their natural enemy, as they have been in the habit of estimating all pale faces; and yet instead of arms or defences, or even of frowns, they galloped out and looked us in our faces, without an expression of fear or dismay, and evidently with expressions of joy and impatient pleasure, to shake us by the hand, on the bare assertion of Colonel Dodge, which had been made to the chiefs, that we came to see them on a friendly visit.

After we had sat and gazed at each other in this way for some half an hour or so, the head chief of the band came galloping up to Colonel Dodge, and having shaken him by the hand, he passed on to the other officers in turn and then rode alongside of the different columns, shaking hands with every dragoon in the regiment; he was followed in this by his principal chiefs and braves, which altogether took up nearly an hour longer, when the Indians retreated slowly toward their village, escorting us to the banks of a fine, clear stream and a good spring of fresh water, half a mile from their village, which they designated as a suitable place for our encampment (*Catlin*, 5).

While there the artist painted the pictures of the chief men of the tribe, together with camp scenes. The pictures form a part of the Catlin gallery in the National Museum at Washington, District of Columbia. In his usual incorrect style, he estimated the population of the tribe at thirty thousand to forty thousand. It may possibly have been one-tenth of that number.

After a few days the command, guided by some of the Comanche, started for the Wichita village lying farther to the west. After four days' march, keeping close along the base of the mountains, they reached the village, which was situated on the northeast bank of the North fork of Red river, about 4 miles below the junction of Elm fork, and within the present limits of the reservation. It was close to the mouth of Devil canyon, with the river in front and the mountains behind. It was an old settlement site of the Wichita, having been occupied by them as far back at least as about the year 1765 (*Lewis and Clark*, 8). Catlin thus describes it:

We found the mountains inclosing the Pawnee [i. e., Pawnee Pique, or Wichita] village, on the bank of Red river, about 90 miles from the Comanche town. The dragoon regiment was drawn up within half a mile or so of this village and encamped in a square, where we remained three days. We found here a very numerous village containing some five or six hundred wigwams, all made of long prairie grass thatched over poles which are fastened in the ground and bent in at the top, giving to them in distance the appearance of straw beehives, as in plate 173 [figure 68 herein], which is an accurate view of it, showing the Red river in front and the "mountains of rocks" behind it. To our very great surprise we have found these people cultivating quite extensive fields of corn (maize), pumpkins, melons, beans, and squashes; so, with these aids and an abundant supply of buffalo meat, they may be said to be living very well (*Catlin*, 6).

The picture by Catlin gives a good idea of the location and a tolerable idea of the peculiar conical grass houses of the Wichita, who have always been noted as an agricultural tribe. As usual, however, he has grossly overestimated their number, attributing to the village five or

six hundred houses, and to the Wichita and Kiowa eight to ten thousand population. It is very doubtful if the two tribes, with all their affiliated bands, ever numbered a total of twenty-five hundred. The Wichita village may have had, all told, seventy or eighty houses. When the author examined the ground, in 1893, the circular depressions where the houses had stood were still regular in shape and plainly visible. According to Wichita information, the village was called *Kĩ'tskûkâtû'k*, a name which seems to refer to its situation beside the mountain, and was abandoned soon after 1834, when the tribe removed to a new location, where Fort Sill is now located. From there they again removed to Rush spring, about 25 miles farther east, where Marcy found them in 1852. The mountains immediately about the site of the village

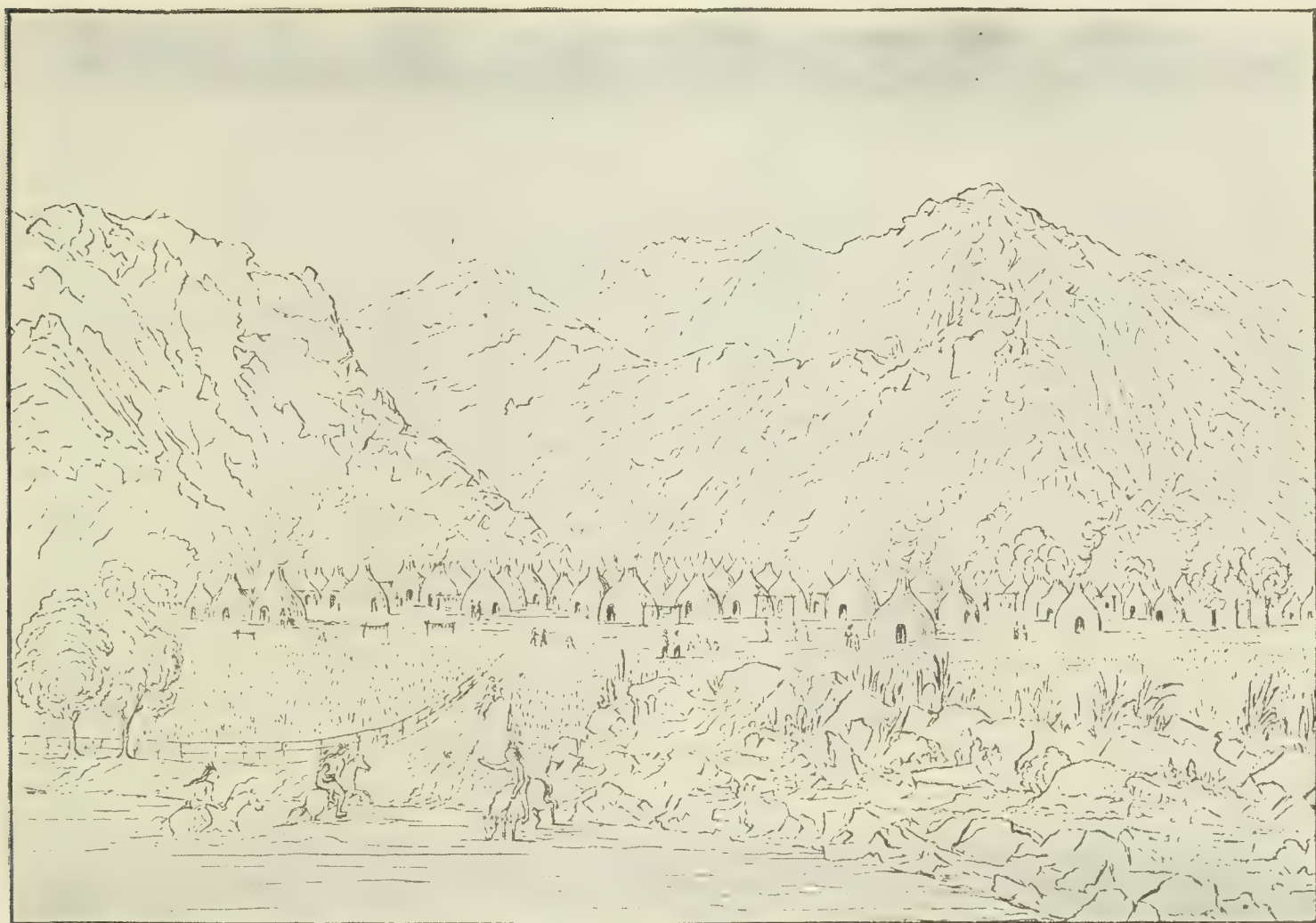


FIG. 68—*Kĩ'tskûkâtû'k*, the Wichita village on North fork in 1834 (after Catlin)

visited by the dragoons are still known to the Kiowa as *Do'gúat K'op*, "Wichita mountains," the name not being applied by them to the more eastern portion of the range.

The meeting with the Wichita threatened at the start to be hostile. Having learned that they had in their possession a captive white boy, Colonel Dodge demanded that he be surrendered. They repeatedly denied having any knowledge of the boy or the circumstances attending his capture until, being convinced by the sight of their own children brought back by the dragoons that the intentions of the white visitors were friendly, they produced him.

An order was immediately given for the Pawnee and Kiowa girls to be brought forward. They were in a few minutes brought into the council house, when they were at once recognized by their friends and relatives, who embraced them with the

most extravagant expressions of joy and satisfaction. The heart of the venerable chief was melted at this evidence of the white man's friendship, and he rose upon his feet, and taking Colonel Dodge in his arms and, placing his left cheek against the left cheek of the colonel, held him for some minutes without saying a word, whilst tears were flowing from his eyes. He then embraced each officer in turn in the same silent and affectionate manner, which form took half an hour or more before it was completed.

From this moment the council, which before had been a very grave and uncertain one, took a pleasing and friendly turn, and this excellent old man ordered the women to supply the dragoons with something to eat, as they were hungry. The little encampment, which heretofore was in a woeful condition, having eaten up their last rations twelve hours before, were now gladdened by the approach of a number of women who brought their "back loads" of dried buffalo meat and green corn, and threw it down amongst them. This seemed almost like a providential deliverance, for the country between here and the Comanches was entirely destitute of game and our last provisions were consumed.

The council thus proceeded successfully and pleasantly for several days, whilst the warriors of the Kiowas and Wicos [Wacos], two adjoining and friendly tribes living farther to the west, were arriving, and also a great many from other bands of the Comanches, who had heard of our arrival, until two thousand or more of these wild and fearless-looking fellows were assembled, and all, from their horses' backs, with weapons in hand, were looking into our pitiful little encampment of two hundred men, all in a state of dependence and almost literal starvation, and at the same time nearly one-half the number too sick to have made a successful resistance if we were to have been attacked (*Catlin*, 7).

The result of the council was that a large delegation from the allied tribes returned with the troops to Fort Gibson, where arrangements were made for the subsequent treaties of 1835 and 1837, as already described, which mark the beginning of the modern history of the Kiowa, Comanche, Wichita, and affiliated bands.

The Wichita, as well as the Kiowa, still remember this friendly meeting. Nasthoe, a Wichita chief, in giving testimony in 1894 in regard to the location of the old village, said: "I was told that the white people and the Osage and the Kidi-ki-tashe [Wichita] came to that old village, where they lived and brought that girl and boy, and inside of one of those tipis they had made a feast among themselves, and the soldiers had fired their guns around there. The meaning of that was a peace" (*Greer County*, 1).

While with this expedition Catlin painted a number of portraits, the first on record from these tribes. He has this to say of his Kiowa subjects:

The head chief of the Kioways, whose name is Teh-toot-sah [Dohásän, see page 175], we found to be a very gentlemanly and high-minded man, who treated the dragoons and officers with great kindness while in his country. His long hair, which was put up in several large clubs and ornamented with a great many silver brooches, extended quite down to his knees. This distinguished man, as well as several others of his tribe, have agreed to join us on the march to Fort Gibson, so I shall have much of their company yet, and probably much more to say of them at a future period. Bonson-gee (The New Fire) [Bohón-kóñkya, Black-cap], is another chief of this tribe, and called a very good man; the principal ornaments which he carried on his person were a boar's tusk and his war whistle, which were hanging on his breast. Quayham-kay (The Stone Shell) is another fair specimen of the warriors of this tribe



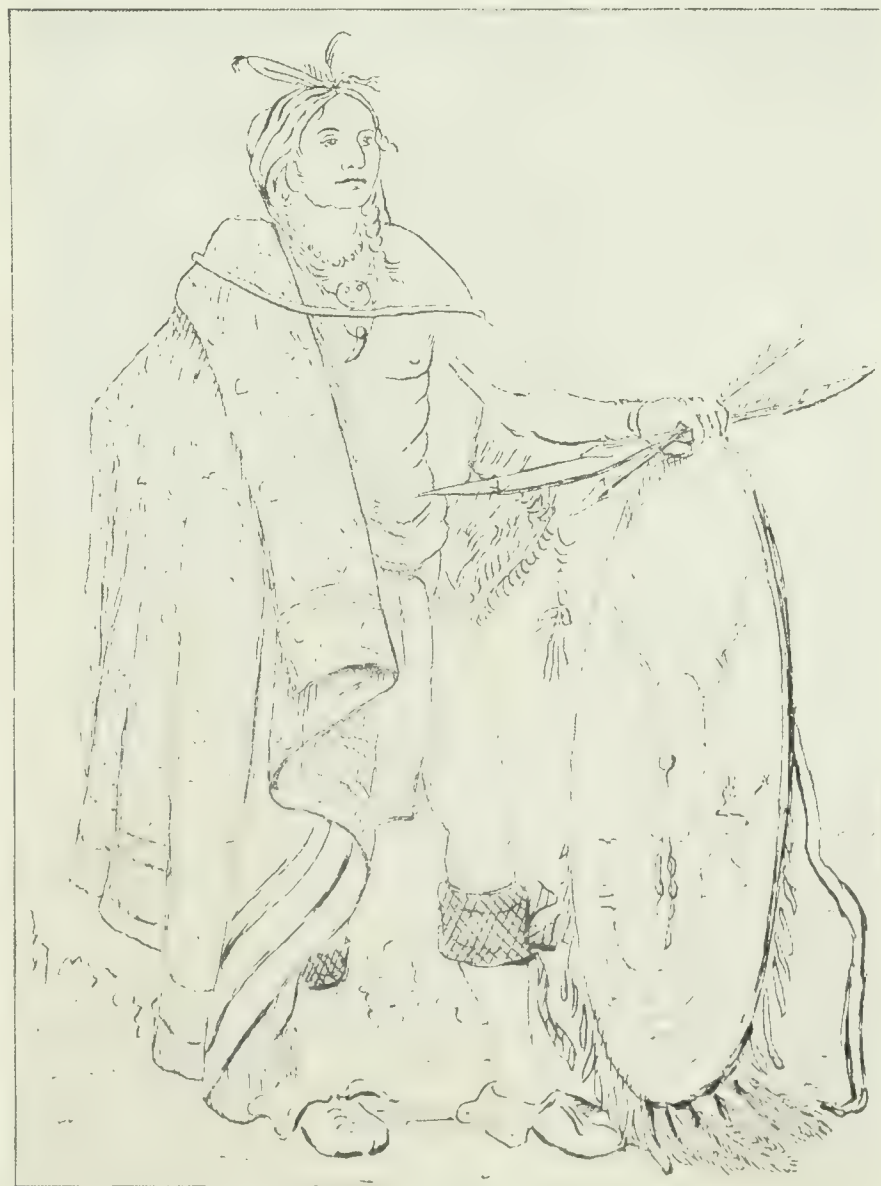
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BÓHON-KÓÑKYA, "QUAYHAMKAY," GUNPĀÑDĀMĀ, AND "KOTSATOAH" (AFTER CATLIN)

. . . Wun-pan-to-mee (The White Weasel) [Gunpä'ñdamä', Medicine-tied-to-tipi-pole], a girl, and Tunk-aht-oh-ye (The Thunderer), a boy, who are brother and sister, are two Kioways who were purchased from the Osages, to be taken to their tribe by the dragoons. The girl was taken the whole distance with us, on horseback, to the Pawnee village, and there delivered to her friends, as I have before mentioned; and the fine little boy was killed at the fur trader's house, on the banks of the Verdigris, near Fort Gibson, the day after I painted his portrait, and only a few days before he was to have started with us on the march. He was a beautiful boy of nine or ten years of age, and was killed by a ram, which struck him in the abdomen, and knocking him against a fence, killed him instantly. Kots-a-to-ah (The Smoked Shield) is another of the extraordinary men of this tribe, near 7 feet in stature, and distinguished not only as one of the greatest warriors, but the swiftest on foot in the nation. This man, it is said, runs down a buffalo on foot, and slays it with his knife or his lance as he runs by its side! (*Catlin*, 8).

Two of those mentioned by Catlin—Dohásän and Bóhón-kóñkya—were signers of the first Kiowa treaty, in 1837, and are still well remembered, as is also the girl, Gunpä'ñdamä'. The other names are too badly mangled to be identified, and the memory of the swift runner seems to have utterly perished.

WINTER 1834-35

Pá-tón Ehótal-de Sai, "Winter that Bull-tail was killed." He was killed by the Mexicans. The figure above the winter sign has a blood spot upon the body to represent the wound, while the erect cue from the head indicates his name.



FIG. 70.—Summer 1835—Cat-tail rush sun dance.

Donpä K'ádó, "Cat-tail rush sun dance." This was the first sun dance held by the Kiowa after the recovery of the *taíme* from the Osages, already narrated, and is thus distinguished because it was held at a place where a great many cat-tail rushes (*Equisetum arvense*) were growing on the south bank of North Canadian river, at the Red hills, about 30 miles above the



FIG. 69.—Winter 1834-35—Bull-tail killed.

SUMMER 1835

present Fort Reno, Oklahoma. The soft white portion of the lower part of the stalk of this rush is eaten raw by the Indians with great relish. The picture above the medicine lodge represents the *taíme bímká-í* or rawhide box in which the *taíme* is kept.

It was immediately after this dance that a war party of Kiowa made the raid far down toward the coast in which they captured Bóiñ-edal (Big-blond), now the oldest captive in the tribe. This man, sometimes known to the whites as Kiowa Dutch, was born in Germany and is now, according to his own account, about 70 years of age. He remembers having gone to school in Germany as a small boy, and came to this country, when about 8 or 9 years of age, with his father, stepmother, and an elder brother. He describes the place where they located as being a small settlement on a large river, up which ships could sail, where there were alligators and trees with long moss, and which was within a day's ride of the sea. The people were engaged in raising cotton, his

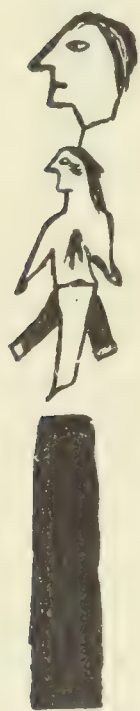


FIG. 71—Winter
1835-36—Big-
face killed.

family being the only Germans. From other evidence it seems to have been about Matagorda or Galveston bay, showing that the Kiowa carried their raids in this direction even to the coast. Within a year of their coming, and before he had learned English, a Kiowa war party attacked the settlement at night, carried off himself, his mother, and his brother, and probably killed his father; his mother was taken in another direction and he never saw her again; she was afterward ransomed by Tométe, the trader already mentioned; his brother committed suicide during the cholera epidemic of 1849; Bóiñ-edal is still with the tribe. As his name indicates, he is a typical German in appearance, and still remembers a few words of his mother language, besides having a fair knowledge of English and Spanish, although he does not remember his own name or birthplace. It was about the same time that the Comanche raided Barker's fort, on the Navasota, in eastern Texas, and carried off the girl Cynthia Parker, who afterward became the mother of Quanah, the present chief of the tribe. The story of these captives may have a hundred parallels among the three confederated tribes.

WINTER 1835-36

Tó^c-edalte (Big-face) was shot through the body and killed by the Mexicans while on a raid into old Mexico. This is Set t'an's statement, which is borne out by the picture of a man, whose name is indicated by the figure of a big head or face above. Other informants, however, deny any knowledge of such a man, and in the notes accompanying the Scott calendar he is called Wolf-hair. The gunshot wound is indicated in the ordinary way.

SUMMER 1836

Gui Pa K'ádó, "Wolf-river sun dance." The figure of a wolf or coyote above the medicine lodge indicates that the dance was held on *Gui Pa* or Wolf river, i. e., Wolf-creek fork of the North Canadian. Soon after the dance the Kiowa moved to another camp north of the Arkansas, while the Kiñep band went on to pay a social visit to the Crows and buy from them ermine and elk teeth for ornamenting their buckskin shirts and the dresses of the women. After they had gone, those who remained behind were attacked in their camp by the whole Cheyenne tribe, but the Kiowa threw up breastworks and defended themselves until their assailants were compelled to retire.



FIG. 73—Winter 1836-37—K'ĩñä-hiate killed.

another, as we have just seen, was visiting upon the upper Missouri.

SUMMER 1837

Sä'k'ota Ä'otón-de Pai, "Summer that the Cheyenne were massacred," or *Ä'k'ádo Pai*, "Wailing sun-dance summer." The figure is the conventional Indian symbol for a battle, with the party attacked defending themselves behind breastworks thrown up in the sand, and the arrows flying among them; below the main figure is another of a man wearing a war bonnet. Compare the battle pictographs from the Dakota calendars as given by Mallery (figure 75).

At the time of the fight the Kiowa, Comanche, and Apache were camped upon a small tributary of Scott creek (*Pohón-ä P'a*, "Walnut creek"), an upper branch of the North fork of Red river, southward



FIG. 72—Summer 1836—Wolf-river sun dance.



FIG. 74—Summer 1837—Cheyenne massacred.

from the present Fort Elliott in the panhandle of Texas. It was in early summer, and they were preparing for the sun dance; a young man was out alone straightening arrows when he saw two men creeping up, with grass over their faces. Thinking they were Kiowa deer hunters, he advanced to meet them, when they fired and wounded him and his horse; he fled back to camp and gave the alarm, and Kiowa, Comanche, and Apache rushed out in pursuit. They soon came up with a small party of the enemy, who proved to be Cheyenne. The Kiowa and their allies killed three of them there, and following the fugitives killed several others; continuing along the trail down the north side of the creek to a short distance below its junction with Sweetwater, they came upon the main camp of the Cheyenne, who dug holes in the sand and made a good defense, but were at last all killed except one, who strangled himself with a rope to avoid capture. The bodies of the dead Cheyenne, 48 in number, were scalped, stripped, and laid along the ground in a row by the victors. Six Kiowa were killed,



FIG. 75—Battle pictures (from the Dakota calendars)

including the grandfather of the present Lone-wolf. T'ébodal, the oldest man now in the tribe, was engaged in this encounter.

Set-t'an states that one Cheyenne wearing a war bonnet was killed as he came out of a tipi (see figure 271). Other informants do not remember this, but say that the Kiowa captured a fine medicine lance in a feathered case, and also a *pabón* or Dog-soldier staff, of the kind carried by those who were pledged to die at their post. The stream where the battle took place is since called *Sä'k'ota Ä'otón-de P'a*, "Creek where the Cheyennes were massacred." The summer of the occurrence is sometimes called *Ä'k'ádá Pai*, "Wailing sun-dance summer," because, although the Kiowa wailed for their dead, the sun dance was not on that account abandoned.

WINTER 1837-38

A'daltem Etkúégán-de Sai, "Winter that they dragged the head." The figure above the winter mark shows a horseman carrying a bloody scalp upon a lance and dragging a bloody head at the end of a reata.

Three Comanche, two men and a woman, were camped alone one night in a tipi on the Clear fork of the Brazos (*Ä'sese P'a*, "Wooden-arrowpoint river"), in Texas, when one of them noticed somebody raise the door-flap and then quickly drop it again; he told the others, and as silently and swiftly as possible they ran out, and jumping over a steep bank of the creek hid themselves just a moment before their enemies returned and fired into the vacated tipi. The Comanche returned the fire from their hiding place and then made their escape to a Kiowa camp near by. In the morning the Kiowa returned to the spot, together with the Comanche, and found a dead Arapaho lying where he had been shot; they scalped and beheaded him, and brought the head into camp dragging at the end of a reata. The old German captive, Bóin-edal, then a little boy and who had been with the Indians about two years, witnessed this barbarous spectacle and still remembers the thrill of horror which it sent through him.

SUMMER 1838

Guí-p'ágya Sä'k'ota Īmdóhü'pa-de Pai, "Summer that the Cheyenne attacked the camp on Wolf river." The combined warriors of the Cheyenne and Arapaho organized a great war party against the Kiowa, Comanche, and Apache, to revenge the defeats of the previous two years. They attacked the camps of the three confederated tribes on Wolf creek (*Gui P'a*), a short distance above where that stream joins Beaver creek and forms the North Canadian, in Oklahoma. They killed several women who were out digging roots and some men whom

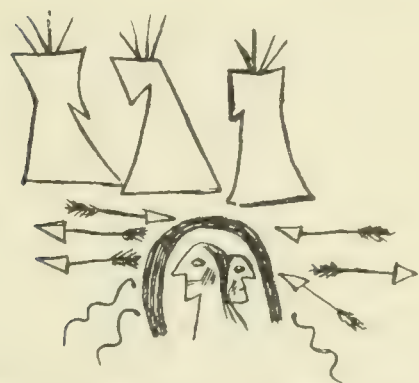


FIG. 77—Summer 1838—Attacked by Cheyenne.

they found out on the prairie after buffalo, but were unable to take the camp, as the Kiowa and their allies sheltered themselves in holes dug in the ground so as to form a circular breastwork. Among others the Kiowa lost *Gui-k'ate* and several other distinguished men.

The figure shows the warriors of the three confederate tribes, indicated by the three tipis, within the breastwork, with the bullets and arrows flying toward them, the bullets (from which it is evident that the Cheyenne had some guns) being represented by black dots with wavy lines streaming behind to indicate the motion.

WINTER 1838-39

While the Kiowa were all together in their winter camp some who had gone out upon the prairie discovered a party approaching. They returned and gave the alarm, upon which all the warriors went out and



FIG. 76—Winter 1837-38—Head dragged.

attacked the strangers, who proved to be Arapaho, killing them all. Set-t'an's father, Tën-piäk'ia ("Heart-eater"), was wounded in the leg in this fight, as indicated by the figure of a man, with blood flowing from a wound in the leg, below the battle picture.



FIG. 78—Winter 1838-39—Battle with Arapaho.



FIG. 80—Winter 1839-40—Smallpox.

SUMMER 1839

Píhó K'ádó, "Peninsula sun dance." The peninsula or bend is indicated by a line bending around the medicine lodge. The dance is thus designated because held in the *píhó*, or peninsula, on the south side of the Washita, a short distance below Walnut creek, within the present limits of the reservation. This dance simply serves as a tally date, as nothing of more special interest is recorded for the summer. It would seem that the incursions of the Cheyenne and Arapaho had prevented the usual holding of the *k'ádó* for the two preceding years.

WINTER 1839-40

Tü'dalkop Sai, "Smallpox winter." The Kiowa were ravaged by the smallpox, the second visitation of that disease within their memory, the first having been in 1818. The disease is indicated in the conventional Indian manner by means of the figure of a man covered with red spots (compare figures from Mallery's Dakota calendar; see also 1861-62 and 1892). It was brought by some visiting Osage, and spread at once through the Kiowa, Apache, and Comanche, killing a great number in each tribe. The Kiowa and Apache fled to the Staked plain to escape it, and the Comanche in some other direction.

This was the great smallpox epidemic which began on the upper Missouri in the summer of 1837 and swept the whole plains north and south, destroying probably a third, if not more, of the native inhabitants, some whole tribes being nearly exterminated. The terribly fatal result of smallpox among Indians is due largely to the fact that their only treatment for this disease and for measles, both of which came to them from the whites, is the sweat bath followed by the cold plunge. In this instance the disease first broke

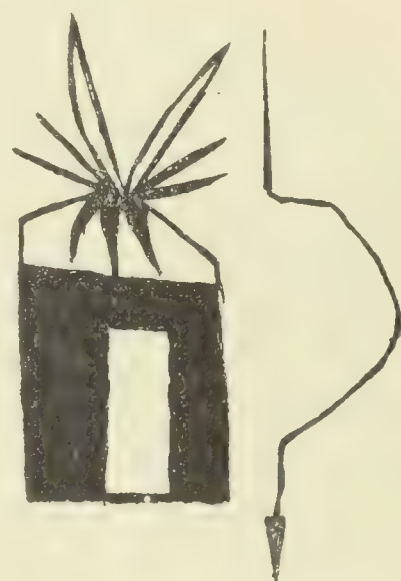


FIG. 79—Summer 1839—Peninsula sun dance.

out among the passengers of a steamer in the Missouri river above Fort Leavenworth, and although every effort was made to warn the Indians by sending runners in advance, the sickness was communicated to them. It appeared first among the Mandan about the middle of July, 1837, and practically destroyed that tribe, reducing them in a few weeks from about sixteen hundred to thirty-one souls. Their neighboring and allied tribes, the Arikara and Minitari, were reduced immediately after from about four thousand to about half that number. The artist Catlin gives a melancholy account of the despair and destruction of the Mandan.

From the Mandan it spread to the north and west among the Crows, Asiniboin, and Blackfeet. Among the last named it is estimated to have destroyed from six to eight thousand (*Clark, 13*). As the plains tribes were then almost unknown to the general government, we find little of all this in the official reports beyond the mention that over sixty lodges of Yanktonais Dakota—perhaps four hundred persons—died by this disease about the same time (*Report, 75*). In 1838 it reached the Pawnee, being communicated by some Dakota prisoners captured by them in the spring of that year. From the best information it seems probable that at least two thou-



FIG. 81—Smallpox (from the Dakota calendars)

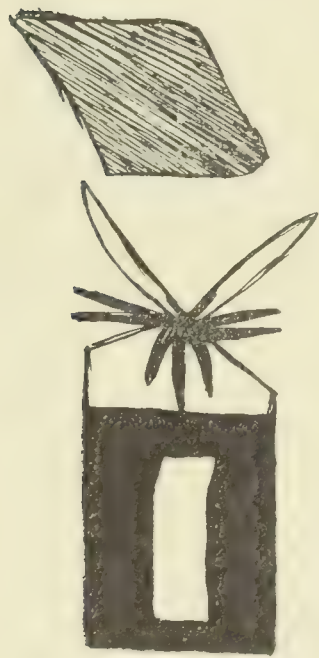


FIG. 82—Summer 1840—
Red-bluff sun dance.

sand Pawnee perished (*Clark, 14*), about double the whole population of the tribe today. It probably continued southward through the Osage until it reached the Kiowa and Comanche the next year, although it is possible that it may have come more directly from the east through the emigrating Chickasaw, who brought it with them to Indian Territory in the spring of 1838 (*Report, 76*). We learn (*Gregg, 6*) that the disease ravaged New Mexico in the spring of 1840 and was again carried east to the frontiers of the United States by the Santa Fé traders.

SUMMER 1840

Gúadal Dóhá K'ádó, "Red-bluff sun dance," so called because held at *Gúadal Dóha* on the north side of the South Canadian, about the mouth of Mustang creek, in the panhandle of Texas. The (red) figure over the medicine lodge is intended to represent the "red bluff." The Red hills on the North Canadian above Fort Reno are called by the same name, but distinguished by the prefix *Sü'k'odal*, "Cheyenne."

The prominent event of this summer was the peace made by the Arapaho and Cheyenne with the Kiowa, Comanche, and Apache—a

peace which, with trifling interruptions, has been kept to this day. According to the Kiowa account, the first overtures were made by the Cheyenne, who sent two delegates with proposals, but the Kiowa were suspicious and sent them back. The Cheyenne then made a second attempt, with more success, and a peace was concluded. The Arapaho were included in this treaty, but, as the Kiowa say, had always been in doubtful friendship, even when their allies, the Cheyenne, were at war with the Kiowa. On the occasion of the notable massacre of Cheyenne, in 1837, the Arapaho were camped with the Kiowa and left to give the alarm to their friends. This agrees with the conduct of the Arapaho in more recent times in remaining neutral while their Cheyenne confederates were at war with the whites.

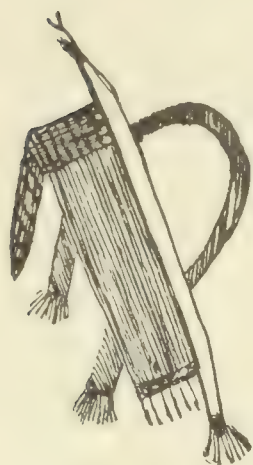


FIG. 83—Winter 1840-41—Hide-quiver war expedition.

WINTER 1840-41

Ká-i Sabíña Dam Sai, "Hide-quiver war expedition winter." The figure of a quiver is above the winter mark. This winter is so called on account of a notable war expedition made by the old men into Mexico, they equipping themselves with old bows and quivers of buffalo skin, as all the younger warriors had already gone against Mexico, carrying all the more efficient weapons and ornate quivers. The latter were usually of panther skin or Mexican leather, but never of deer, antelope, or buffalo skin if it could be avoided.

SUMMER 1841

As the Kiowa were constantly moving about this summer, no sun dance was held. The Arapaho met and attacked a party of Pawnee at *T'aín Dóhá*, "White bluff," on the upper South Canadian, near the line of New Mexico, and killed all of them. The Pawnee threw up breastworks, but, according to the Kiowa account, an Arapaho medicine-man who knew the proper medicine song sat down facing the breastworks and sang the song, moving his hands as in the hand game, and thus "drove them out," when they were killed in line one after another as they ran. The Kiowa were not present at the fight, but met and joined the Arapaho just afterward, when a final treaty of peace was concluded between the two tribes. Stumbling-bear visited the spot some years afterward and saw the skeletons of the dead Pawnee warriors still lying as they fell.

The figure represents the bluff with the Pawnee below it, the tribe being indicated by the peculiar Pawnee scalplock and headdress (see

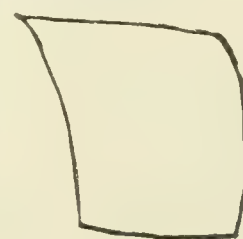


FIG. 84—Summer 1841—Pawnee fight.

winters 1849-50 and 1852-53, and summer 1851). The breastwork is omitted, perhaps through oversight. As there was no sun dance this summer, the medicine lodge is not represented. It will be noted that the "white bluff" is drawn only in outline, i. e. white, while the figure of the "red bluff" (summer 1840) is filled in with red.

WINTER 1841-42

Â'dalhabä'-k'ia Ehótal-de Sai "Winter that *Â'dalhabä'-k'ia* was killed." *Â'dal-habä'* or *âdl-habä'*, "sloping, or one-sided hair," is the name applied to a style of wearing the hair shaved close over the right side of the head, so as to display the ear pendants, and at full length on the left. The hair is not braided, but is sometimes tied, and the scalplock is worn as usual. The man killed, who was a noted war chief, wore his hair in this fashion, hence his name. The picture is intended to represent the style of hair dress, with the mark of a wound on the body to show where he was shot. The bird on top of his head is intended to represent an ornament of red woodpecker feathers, which he wore on the left side of his head. Another Kiowa chief present on this occasion was *K'adógyä'tó*, "Old-man-of-the-sun-dance," so called because consecrated to the *taíme*, the sacred image of the sun dance.

The fight occurred in the fall of 1841 on a small stream called by the Kiowa *Tóñ-zó'gódal P'a*, "Swift-water river," or *Päbo P'a*, "American-horse river," south of Red river, near the Staked plain, and apparently a head branch of Pease river in northwestern Texas. The whole Kiowa tribe was camped on the stream when a party of Texan soldiers advanced against them. Five scouts who were in advance of the soldiers were killed by the Kiowa and their horses captured, but with the loss of *Â'dalhabä'-k'ia*. Abandoning their camp, the Kiowa fled, but returning a few days later, they found the soldiers still there and succeeded in killing another. On account of the number of large American horses captured by the Kiowa in this encounter the stream was afterward called by them "American-horse river."

The party encountered by the Kiowa on this occasion was the Texan Santa Fé expedition, and the fight occurred on August 30, 1841. The whole story as given by Kendall corresponds remarkably with the Indian account, which was obtained without any knowledge of the printed statement on the part of either the author or his informants, having been handed down orally for over half a century. The affair occurred, as already stated, on the edge of the Staked plain while the party was searching for Red river and near a stream which Kendall calls the Quintufue. Several days previously the expedition had met



FIG. 85—Winter 1841-42—*Â'dalhabä'-k'ia* killed.

a number of Kiowa, who had acted insolently, and were apparently responsible later on for several missing horses and mules.

On the 28th the Texans had crossed the stream and come suddenly upon the main camp of the Kiowa, who fled at their approach.

Scarcely had we unsaddled our horses and turned them loose before one of our hunting parties came in and reported that a large body of Indians were in our immediate vicinity, and that they had driven off an immense *cavallada* or drove of horses. Soon another party arrived with information that they had met a small body of Indians, one of whom spoke Spanish. They said that they were Caygüas, and on being interrogated concerning the direction towards Santa Fé, gave equivocal answers. They pointed to the southwest, however, to what appeared a passage through the hills, and said that was the direction to Chihuahua. They pretended to know nothing about Rio Colorado or Red river. These Indians were mounted on fine horses, were dressed in buckskin, and armed with lances and bows and arrows.

The stream upon which we were now encamped appeared to have its source in the long chain of hills upon our left and ran in nearly a northeast direction. A short distance above us, occupying a beautiful situation on the same stream, the main camp of the Indians in our neighborhood was discovered. It had apparently been just deserted, the inhabitants in their great haste to drive off and secure their horses not having time even to cache their other property. Tent poles, skins, numerous rough utensils, besides a quantity of dried buffalo, mustang, and deer meat were found precisely as they had left them. The latter we appropriated to our own use, and in our half-starving condition was found extremely palatable. . . .

Two days later they were preparing for their morning start, when suddenly a young man came dashing into camp from the northward, evidently much agitated, and announced that a large body of Indians were pursuing a party of our men directly towards us. Scarcely had he finished speaking before firing was heard but a few hundred yards distant, a slight roll of the prairie concealing the combatants from our sight. Fast as they could mount horses a party of some fifty of our men dashed off toward the scene of strife, while the wagons were drawn up in square, the cattle and horses brought inside, and every preparation made to resist an attack, which was now considered certain. The first impression was that the scouting parties had been entirely cut off and that these successes would induce the Indians to attack our main body.

Just as the party of our men who had gone out to the relief of their companions reached the spot the Indians retreated; but their bloody work was done. Scattered about within the circumference of a few yards were the dead bodies of Lieutenant Hull and four of our men, stripped, scalped, and horribly mutilated, while the appearance of the ground gave strong evidence that manfully and with strong hearts they had resisted the attack of their adversaries. They had left camp but a short time previous, probably with the hope of finding water, and in returning had been thus cruelly murdered. But one look at their mangled bodies was sufficient to stir deep feelings of revenge in every heart, and madly did our men spur their horses in pursuit, with the vain hope of avenging the death of their companions. The Indians were at least four times their number, yet they retreated, and being far better mounted were able to keep out of the way. So near, however, were our men that they could plainly see the dead bodies of several of the Indians packed upon extra horses they had with them for that purpose. The prairie warriors always have horses trained especially to carry off their dead or wounded companions, which they take with them on going into action, and it is considered one of the greatest calamities that can befall them if they are compelled to leave one of their number in the hands of an enemy.

The pursuit of the bloodthirsty Caygüas, for such the Indians proved to be, was continued by our men until it was evident that they could not be overtaken, and

then reluctantly given up. Several times during the chase the Indians reined up their well-trained horses on the higher rolls of the prairies and formed in line as if intending to give battle; but before our men could get within gunshot they were off again with lightning speed across the plain. On returning to the spot where our men had fallen, a closer examination showed how hard and desperate had been the struggle. Lieutenant Hull had received no less than thirty arrow and lance wounds before he fell, and the broken stock of one of Colt's rifles was still retained in the grasp of a stout man named Mayby, plainly telling us that he had fought to the last, and that after discharging the piece he had still continued the combat. The heart of one of the men was cut out, and had not the Indians been driven off the other bodies would have been mutilated in the same way. Two of the horses of our unfortunate comrades were lanced close by; the others were probably in better condition and more able to run, and had been taken off as spoils by the savages. It was evident enough that Lieutenant Hull and his men had retreated from the Indians until they had found it impossible to elude them, and that they had then thrown themselves from their horses in a body and sold their lives at a fearful rate. The resistance they made had probably terrified their adversaries and induced them to fly when they saw our party coming up, although they outnumbered the Texans at least as three to one.

A party of fifty well-armed men, taking with them shovels, were sent out immediately on the melancholy errand of burying our murdered companions, while the main body retraced their steps toward the Quintufue. . . .

They [the Kiowas] appear to be on terms of peace with the New Mexicans so far as it suits their interest and convenience—no further; at one time trading and exchanging their skins in amity, and almost in the same breath making a descent upon the unprotected frontiers, plundering and frequently murdering the inhabitants. When we passed through their country a party of Mexican traders were among them bartering meal, blankets, and trinkets for buffalo and deer skins. Some of these Mexicans we afterward saw, and from them learned that ten of their warriors, besides a principal chief, were killed by Lieutenant Hull and his brave companions before they were overpowered. The traders also gave us an account of their ceremonies on returning to camp with their scalps and trophies. A wild dance was executed by the braves in celebration of their victory, while the women tore their hair and faces and ran naked through the prickly pear and thorn bushes in token of their grief for the loss of their husbands and brothers (*Kendall*, 2).

SUMMER 1842

Ä'däldü K'ádó, "Repeated sun dance." The summer is called by this name because, as indicated in the figure, it was remarkable for two sun dances held at the same place on *K'ádó P'a* or "Sun-dance creek" (Kiowa Medicine-lodge creek, which enters the North Canadian near 100°). This could happen only when two individuals in succession had been so instructed in dreams. In this instance the two dreamers belonged to different camps and made their requests of the *taíme* keeper almost simultaneously. After the first sun dance, when the *taíme* priest had gone home, instead of taking down the medicine lodge and building a new one, they decked it with fresh leaves and held the second dance in it.

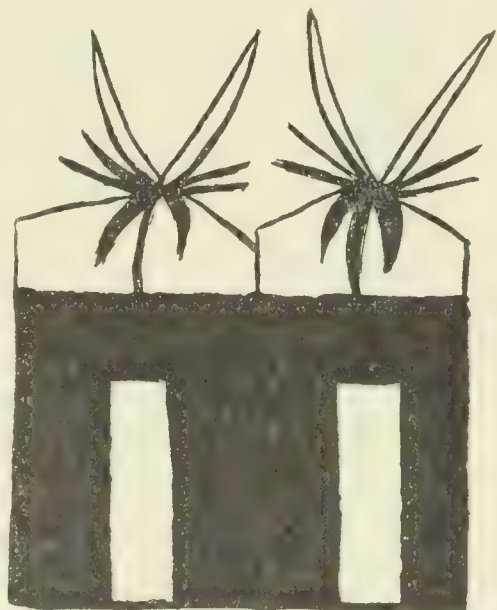


FIG. 86—Summer 1842—Repeated sun dance.

WINTER 1842-43

Gaá-k'ódálte Hém-de Sai, "Winter that Crow-neck died." The chief *Gaá-k'ódálte*, or "Crow-neck," died in the late fall of 1842 at *Gómgýä Dan*, "Wind canyon," above *Gáñta P'a*, "Trading river," an upper branch of Double-mountain fork of Brazos river in Texas. He was

a Kiñep with a Crow wife (see summer, 1836), and was the adopted father of the German captive, *Bóin-edal*, already mentioned. The figure shows him in connection with a crow, to indicate his name.



FIG. 87—Winter 1842-43—Crow-neck died.

SUMMER 1843

Ä'ntsenküädal-de K'ádó, "Nest-building sun dance." The figure is intended to show a bird's nest at the top of the center pole of the medicine lodge. This dance, like the last, was held on *K'ádó P'a*, which was a favorite resort for the purpose, as the name indicates, at least five Kiowa sun dances having been held there. The occasion is rendered memorable by the fact that a crow built her nest and laid her eggs upon the center pole of the medicine lodge after the dance was over.

After the dance a war party under (the former) Big-bow and Kicking-bird went into Texas and captured a number of horses. On their return they met a party of soldiers carrying American flags, and believing them to be Americans (i. e., Northerners, as distinguished from Texans), whom they regarded as friends, they shook hands with them and gave them back the horses. They afterward learned that the whites were Texans, who had adopted this stratagem to deceive them. The Texans also had with them a captive Comanche and a Mexican. The Kiowa rescued the Comanche, but left the Mexican, as no one wanted him.

WINTER 1843-44

The event here recorded occurred at or immediately after the sun dance in the summer of 1843, but is indicated above the winter mark as a matter of convenience. The figure represents a woman wounded in the breast.

After the women have cut down the trees for the medicine lodge they drag them to the place where the lodge is to be erected, escorted by a body of warriors in front and on each side. A warrior frequently invites a woman to get up and ride behind him, and the invitation is generally accepted. Among some tribes a procession in which the women ride behind the men is a feature of the ceremony. Although this is customary,



FIG. 88—Summer 1843—Nest-building sun dance.

it sometimes gives rise to jealous feelings on the part of husbands or lovers. On this occasion, at the invitation of the chief Dohásän, a woman got upon his horse behind him, which so enraged her husband that he stabbed her. The woman recovered, and the husband received no other punishment than a rebuke from Dohásän, who told him that he ought to have better sense, as he (Dohásän) was a great chief and an old man—too old to be running after girls.

Immediately after the dance, a war party under Gíädédéete (Faces-the-line), went against the *Ä'-t'a'ká-i* (Timber Mexicans) or Mexicans of Tamaulipas. They killed a number of people and destroyed houses, but on recrossing the Rio Grande encountered a body of Mexican troops when Gíädédéete and two others were killed.

In the following winter *K'ódal-aká-i*, "Wrinkled-neck," a clerk of the Bents, built a log trading house about a mile below *Gúadal Dóha*, "Red bluff," on the South Canadian, near the mouth of Mustang creek and a few miles above Adobe Walls, in the Texas panhandle (see winters 1845-46 and 1864-65). It is also stated that the same man, at a later period, built another trading post at a fine spring a few miles above this one at *Gúadal Dóha* on the same (north) side of the river.

SUMMER 1844

K'ódalpük'ii K'ádó, "Dakota sun dance." A number of mounted Dakota paid a friendly visit to the Kiowa to dance and receive presents of ponies, while the Kiowa were engaged in the sun dance, which was held, like the last two preceding, on *K'ádó P'a* or Kiowa Medicine-lodge creek. Although the Dakota had been at war with the Kiowa when the latter lived in the north, the two tribes had now been friends for a long time, so long that the old men do not remember when the peace was made.



FIG. 90—Summer 1844—
Dakota sun dance.

wearers of such necklaces.

The explanation appears to be a myth founded on a misconception of the tribal sign for Dakota, which is the same as for necklace, i. e., a sweeping pass of the hand across the throat, but commonly translated "beheaders" when applied to that tribe.

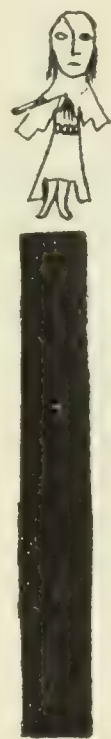


FIG. 89—Winter
1843-44—Wom-
an stabbed.

The Dakota are represented by the figure of a man's bust, wearing a *k'ódalpä* or necklace bracelet of long shell or bone tubes, popularly known among the traders as Iroquois beads. The Kiowa call the Dakota the *K'ódalpä-k'ügo*, "Necklace people," and say that the Dakota were the original

WINTER 1844-45

Ä'-tahá-ik'í *Ehótal-de Sai*, "Winter that War-bonnet-man was killed." The figure shows a man wearing a war-bonnet (ä'-tahá-i) and with a wound in his breast. He is further distinguished by the crosses (stars) with which his war shirt is ornamented. This "medicine shirt"



FIG 91—Winter 1844-45—Ä'tahá-ik'í killed.

was covered with dark-blue stars, with a green moon in front, in addition to which he wore a fine war-bonnet. He was also called Sét-k'ódalte, "Bear-neck."

The brother of Zépko-eéte (Big-bow, grandfather of the present old Big-bow, from whom he takes his name) had been killed in Tamaulipas, and at the last sun dance Big-bow had "given the pipe" to the Kiowa and their allies to revenge him. A large party of over two hundred warriors, including a number of Apache and Comanche, set out under Big-bow, and after crossing the Rio Grande and approaching the Salado (*Señ P'a*, "Cactus river") they reached a stone fort, in which a small number of Mexicans, not soldiers, had taken refuge. The Mexicans had with them their families, also two Indians, who wore feather crests upon their heads. The fort was so provided with loopholes that they could fire upon the attacking party, themselves remaining concealed. The first attack was repulsed, and Ä'-tahá-ik'í was killed; but the besiegers succeeded in piling wood against the log walls of the fort and setting fire to it, when all the defenders were either burned or killed as they tried to escape. Ä'dalpepte took part in this affair. After this fight the Kiowa warriors went farther into Mexico and had another encounter, in which Big-bow, the leader, was killed, in consequence of which the war party returned home.

"Giving the pipe" is the ceremonial way of enlisting recruits for a large war party. For small expeditions the invitation is given as described in treating of the *Gúa-dágya* (winter 1862-63). At the time of the annual summer assemblage for the sun dance the organizer of the expedition, who must necessarily be a person of some prominence, sends a pipe to the leaders of each of the principal warrior orders—*Ká'itséñko*, *T'äñpéko*, etc—in turn. If these leaders sanction the enterprise, they themselves smoke and present the pipe to the members of their orders at their next meeting, and all who smoke engage themselves by this act to join the expedition at the time appointed by the original giver of the pipe. No one is obliged to smoke against his will, but when a sufficient number have determined upon the expedition, it takes precedence of all others, and no other parties or individuals may start out against the enemy in any direction until this expedition is concluded.



FIG. 92—Giving the war pipe (from the Dakota calendars).

SUMMER 1845

Tsó-k'ódal K'ádó, "Stone-necklace sun dance." The figure above the medicine lodge is intended to represent a girl, distinguished by short sleeves, with a stone hanging from her neck.

This dance, like the three preceding, was held on *K'ádó P'a* (Kiowa Medicine-lodge creek), which was a favorite stream for the purpose, on account of the abundance there of cottonwoods, of which the medicine lodge was constructed. The event which distinguished the dance was the death of a girl named *Tsó-k'ódalte* (for *Tsó-k'ódalpä-te*), "Stone-necklace," who was much beloved by her father, and the consequent wailing for her during the season of the ceremony.

WINTER 1845-46

In this winter *K'ódal-aká-i*, "Wrinkled-neck," built a trading post on the South Canadian. The picture is sufficiently suggestive. This post was in the panhandle of Texas, on the north bank of the South Canadian (*Gúadal P'a*, "Red river"), just above Bosque Grande creek and about 2 miles above the entrance of Red-deer creek (*Kó'gá-i P'a*, "Elk creek"). It was in a swampy and well-timbered location, just west of one of the main trails from Arkansas river southward. It was owned by William Bent, called by the Kiowa *Máñtahák'ia* ("Hook-nose-man," "Roman-nose") who, in the spring of 1844, had built a trading post, as already noted, at *Gúadal Dóha*, higher up on the same river. Both were in charge of a clerk known to the Kiowa as *K'ódal-aká-i*, "Wrinkled-neck."

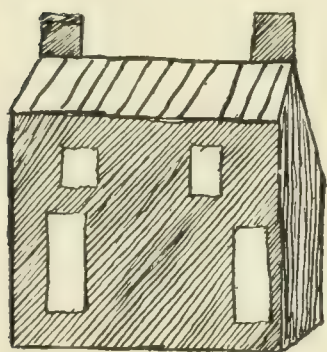


FIG. 94—Winter 1845-46—Wrinkled-neck's trading post.

The removal of Bent's base of operations from the Arkansas to the Canadian seems to have marked the southward drifting of the tribes, in consequence of the destruction of the buffalo and the encroachments of the Dakota, as noted by Frémont and other western explorers of this period. At the same time the Kiowa had dealings with another trading post, kept by William Allison, known to them as *Tsódal-héñte*, "No-arm," on Arkansas river at the junction of upper Walnut creek, in Kansas. As has been stated, the first trading post ever established in their country was built by Chouteau, on Cache creek, near the present Fort Sill.

SUMMER 1846

Pá-guñhéñté Áópäñ-de K'ádó, "Sun dance when Hornless-bull was made a *Kâ'itsén-k'ia*." The figure beside the medicine lodge repre-



FIG. 93 — Summer 1845 — Stone-necklace sun dance.

sents a man with the feather headdress and paint of the Kâ'itséñko, the chief order of the warrior society. There is nothing to indicate the name of the individual, which is carried in the memory of the artist. This dance was held on a small tributary of the North Canadian, a short distance above Kiowa Medicine-lodge creek.

The Yä'pähe or military organization of the Kiowa has been already noted. The highest order was the Kâ'itséñko, or "Real dogs (?)," a select body of ten of the bravest warriors, who were pledged to lead every desperate charge and to keep their place in the front of battle until they won victory or death. With this purpose in view, their leader carried a ceremonial arrow, with which he anchored himself to the ground by means of a broad sash of elk-skin, which encircled his neck like a collar and hung down at his right side to the earth; at the lower end, where it trailed upon the ground, there was a hole, and when forming line for the charge it was his duty to dismount in front of his warriors, and, by thrusting the arrow through this hole, to fix himself in this position, there to remain until his party was victorious, or until,

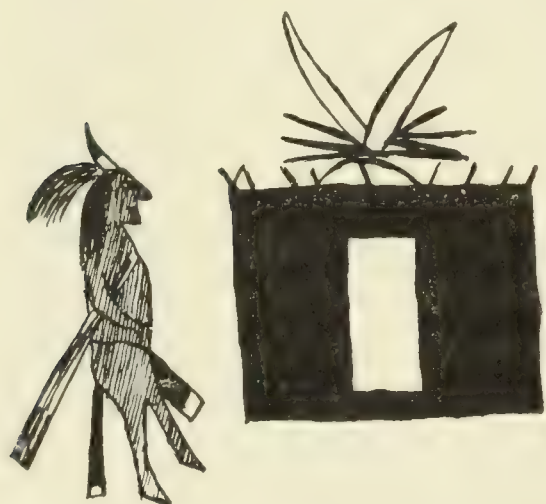


FIG. 95—Summer 1846—Hornless-bull initiated.

seeing that all was lost, they gave him liberty to retreat by pulling out the arrow from the ground. Should they forget this in the hurry of their flight, he must remain and die at his post. During the action, also, he was obliged to remain stationary, without endeavoring in any way to avoid the danger.

Whenever a leader died or was killed another was selected from among the Kâ'itséñko to carry the arrow. As the regulations governing it were adhered to very strictly, it can readily be understood that

on the occasion of an election the office usually sought the man. As the Kiowa or other tribes, however, had no desire to sacrifice their bravest men needlessly, the ceremonial arrow or its equivalent was carried only when the expedition meant war to the bitter end against the enemy. In the absence of this emblem of his rank the owner took his place as an ordinary warrior. He might even lend it to a warrior who wished to distinguish himself in a war party while the owner remained at home; but should he do this when any serious expedition was in preparation, he was considered to be a coward and was degraded from his rank. The leaders of the Tónkónko, "Black legs," another warrior order, carried a lance somewhat resembling a shepherd's crook and called a *pabón*, which had nearly the same purpose as the arrow of the Kâ'itséñko. The noted chief Set-ängya, who was killed at Fort Sill in 1871, was the leader of the Kâ'itséñko at that time, and deliberately invited death in accordance with the obligation of his office.

The Kâ'itséñko initiations took place only on the occasion of a sun dance and were not of frequent occurrence, so that the event was

always a matter of considerable importance. The membership was always kept up to the requisite number of ten. The prominent feature of the ceremony was the investiture of the new members with the *ópäm-yaípo*, or collar sash of the order; hence the verb *üópä*, "to initiate into the Kâ'itséñko," which is derived from the verb *üópüñ*, "to tie with a rope around the neck." This ceremony evidently explains the picture from the Dakota calendar (figure 96) which Mallery translates "they made bands of strips of blankets in the winter," and goes on to say: "These bands were of mixed colors and reached from the shoulders to the heels. They also made rattles of deer-hoofs by tying them to sticks with bead-covered strings. The man has a sash over his shoulders and a rattle in his hand." The rattle was also a part of the ceremonial equipment of the Dog-soldiers, and as the Dakota calendar does not distinguish between seasons, the ceremony may as easily have taken place in the summer, the ordinary season for Indian celebrations on the plains.

Of the ten *ópäm-yaípo*, the principal one, called the *yaípo-kóñkya*, "black rope," was made of elk-skin colored black and was worn by the leader, the most noted of whom in recent memory was Set-ängya. Three were made of red cloth and were called *yaípo-gúădal*, "red ropes," while the remaining six were made of elk-skin dyed red and were called simply *ópäm-yaípo*. Any of the Kâ'itséñko was at liberty, if he did not choose to go on a particular expedition, to lend his sash to another for the occasion; but if cowardice was suspected to be his motive for this action he was degraded from his rank and the sash taken from him and given to a braver man. Usually each one had a younger partner (*tsä*), whom he allowed to wear his sash while in camp or even on less important expeditions, but when any great war party was on foot, he must wear it and go himself or run the risk of being considered a coward. When a wearer became too old to go to war, he formally resigned his sash to some younger man whom he deemed worthy to wear it, the recipient acknowledging the honor with presents of blankets or other property. Sometimes the sash was publicly taken from a warrior grown too old to wear it in battle, but this was not necessarily regarded as a degradation when there was no implication of cowardice.



FIG. 96—Dog-soldier initiated(?) (from the Dakota calendars).

WINTER 1846-47

Sénpága Etága-de Sai, "Winter when they shot the mustache." The figure represents a man shot in the mustache or upper lip by an arrow. The long hair and the breech-cloth shows that he was an Indian, and the beard or mustache is exaggerated to accentuate the idea. Mustaches are not infrequent among the older men of the Kiowa, and Set-ängya had almost a full beard.

While the Kiowa were encamped for the winter on Elk creek, a tributary of the North fork of Red river, within the limits of the present reservation, a band of Pawnee coming on foot stole a number of their horses. The Kiowa pursued them northward and overtook them on the Washita and recovered the horses after a fight in which one Pawnee was killed. In this action Set-ängya engaged a Pawnee and was about to stab him with his lance when his foot slipped on the snow, causing him to fall, and the Pawnee sent an arrow through Set-ängya's upper lip.



FIG. 97—Winter 1846-47—Mustache shooting.

SUMMER 1847

Mâ'nka-gúădal Ehótal-de Pai, "Summer that Red-sleeve was killed." The figure shows the Indian leader with his war-bonnet and red sleeve. The medicine lodge is absent, showing that there was no sun dance that year.

Mânka-gúădal is the Kiowa name of the Comanche chief Red-sleeve (*Îkâmosa?*), who was killed in an attack against a party of Santa Fé traders in Kansas, where the Santa Fé trail crossed Pawnee fork of the Arkansas, below the present Fort Larned, which was not built until 1859. Pawnee fork, properly called by the Kiowa *Aíkoñ P'a*, "Dark-timber river," is sometimes called by them from this circumstance *Mâ'nka-gúădal-de P'a*, "Red-sleeve's river." According to the story told by the Kiowa, they and the Comanche were out in search of the Pawnee when they met at this point a large party of white men with wagons—evidently Santa Fé traders. Red-sleeve wanted to attack them, but Set-ängya, the Kiowa leader, refused, saying that the whites were their friends. Red-sleeve then taunted the Kiowa as cowards, put on his war-bonnet, and, calling his Comanche, attacked the traders. The Kiowa, wishing to avoid trouble, drew off. About the first fire a bullet went through the leg of Red-sleeve and into the spine of his horse, so that the animal fell, pinning his wounded rider to the ground. He called on Set-ängya to help him, but the Kiowa chief refused on account of the taunt of cowardice, and the white men came up to Red-sleeve and shot him.

As the government had but little communication with the tribes of the southern plains until some years after the Mexican war, there is no direct notice of this occurrence in the official reports, but a letter by agent Fitzpatrick in the report of the Indian Commissioner for 1848, the year after the attack upon the train, bears out the statement of the



FIG. 98—Summer 1847—Red-sleeve killed.

Kiowa that they were anxious to keep peace with the whites, even at the risk of quarreling with the Comanche and losing some very profitable business opportunities. Speaking of depredations upon parties traveling on the emigrant roads and the Santa Fé trail, he says:

Before leaving there [Bent's fort] last February I had an interview with some of the Kiaway chiefs, and who have heretofore been allies of the Comanches. They expressed themselves as sorry for having anything to do with the war against us, and promised to quit their country and all intercourse with the Comanches and join the Cheyennes on the Arkansas, who are the friends of the whites. This course I approved, and since my departure from that country last spring learned that nearly all the Kiaways have moved to the country of the Cheyennes and Arapahoes and are living in perfect amity with the surrounding tribes.

He also states that there seem to have been fewer attacks made upon travelers along the Santa Fé road recently, which he can account for only on the supposition that "the Indians having, in 1846 and 1847, secured so much booty by their daring outrages upon travelers, are now and have been the past summer luxuriating in and enjoying the spoils" (*Report*, 77).

WINTER 1847-48

They camped all winter on *T'aiñ P'a*, "White river," an extreme upper branch of the South Canadian (perhaps identical with Major Long's creek). The figure represents the winter

camp with the brush windbreak around it.

SUMMER 1848

Ópüñ K'ádó, "Kâ'itséñko initiation sun dance." This dance was held on Arkansas river near Bent's fort, in Colorado, and was distin-



FIG. 100—Summer 1848—Initiation sun dance.

guished by the initiation of several Kâ'itséñko (see summer 1846). The figure represents an initiate with his (red) body paint and *ópümyaípo*.

WINTER 1848-49

The Kiowa were camped on Arkansas river near Bent's fort and made "antelope medicine" (*ä't'á'kagúá*) for a great antelope drive. Compare the figures from the Dakota calendars of Mallery (figure 102).

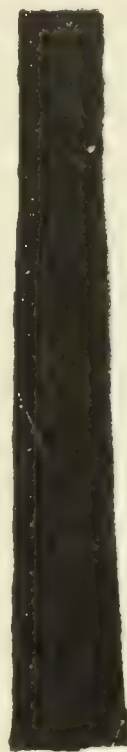
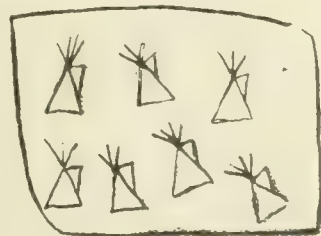


FIG. 99—Winter 1847-48—Winter camp.



FIG. 101—Winter 1848-49—Antelope drive.

The antelope drive was made only in seasons of scarcity, when the supply of buffalo meat was insufficient, and only in the winter, at which season the antelope are accustomed to go in herds, while in the spring and summer they scatter. Such a drive was an event so rare that one informant over 60 years of age had seen but one in his lifetime.

When it has been decided to have an antelope drive, the "antelope medicine-man" builds a special tipi and remains in it all night, singing his medicine songs until daylight. In the morning he starts out in the probable direction of the antelope, carrying in each hand a rod about two feet long decorated at each end with eagle feathers and in the center with a wheel from which depend the feathers of other carnivorous birds, his face is painted white, a buffalo robe is thrown over his shoulder, and a whistle hangs from his neck. He is accompanied by the whole tribe, mounted and on foot—men, women, and children. On arriving at the place selected for the hunt, he sits upon the ground, facing the direction in which the antelope are supposed to be; in most other Indian ceremonies the priest faces the east. Beside him sit some of the principal men, while behind stand several women. The two

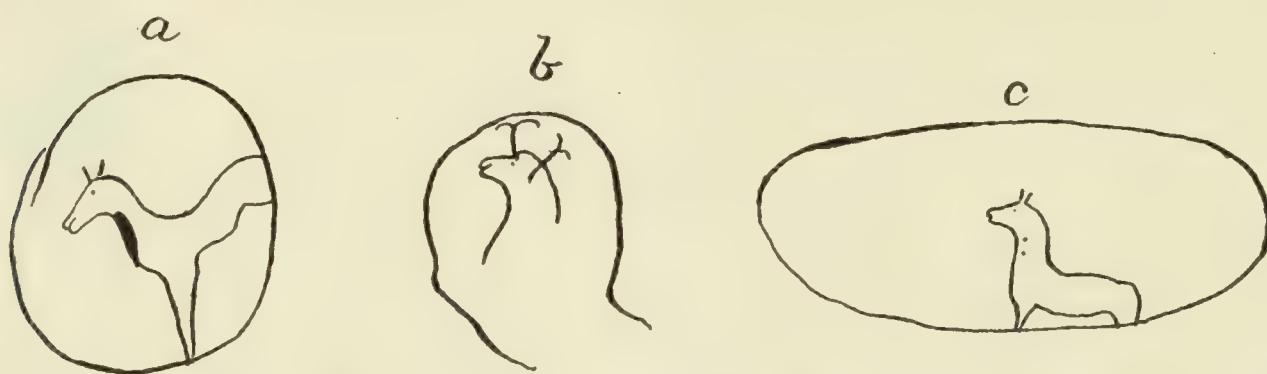


FIG. 102—Antelope drives (from the Dakota calendars)

men chosen to sit next him on each side must be men known as successful in the hunt and on the warpath. He plants the two decorated sticks in the ground in front of him, lights his pipe, and begins to smoke; after smoking a little while he hands the rods to the men sitting next him, crossing his right hand over his left as he does so, and giving their hands a peculiar pressure four times. These two men then rise, put their hands upon his head—a gesture of prayer or invocation—step across each into the place of the other so as to again reverse the position of the rods, and then, after the same four hand pressures, again plant the rods in front of the priest.

Two other men, noted war chiefs, then take their places beside the priest, while the first two sit next them. Grasping the upright sticks at the top, the priest now sings the first antelope song, blowing upon the whistle at intervals, while all the surrounding men and women join in the song, and the four men sitting beside him beat time on the ground. Four different songs are sung in this manner, the sticks being grasped lower down at each song, until at the last song the priest pulls them out from the ground, and, holding them by their lower ends,

pushes them out alternately in front of himself, while the whole company—mostly women now, as the men have gone on ahead—swell the chorus, waving their arms with a sweeping motion, as if grasping at the antelope. Then the two war chiefs place their hands upon his head as before, and he gives them the sticks, with four other hand pressures. Taking the rods, the two chiefs run forward on foot at full speed on diverging lines until they meet two horsemen, to whom they deliver the rods, and then return to the place where the priest is sitting with the women and children. In the meantime the hunters have ridden far out in a semicircle, so as to inclose a large area of country. The two hunters who have taken the rods now also ride far out on diverging lines, then turn, cross each other's paths, and return to the priest. The four songs "draw the minds" of the antelope to the priests, and the crossing of the paths typifies the surrounding of the game by the lines of hunters.

The horsemen now begin to close in toward the center, driving before them the antelope and any other animals that may be within the semicircle; as they approach, the women close in from the opposite side, and as the circle contracts, with the frightened animals running about within it, they seize them with their hands or with reatas. It is said that once, in such a drive, a woman caught a coyote by throwing her arms about its neck. No shooting is allowed within the circle, but any antelope that break through are pursued and shot outside (for other methods, see winter 1860-61).

SUMMER 1849

Mayíagyǎ' K'ádó, "Cramp (i. e., cholera) sun dance." The figure beside the medicine lodge represents a man with his limbs drawn up by the pangs of cholera, which the Kiowa name "the cramp," from its characteristic feature. Compare the corresponding figure (104) from the Dakota calendar for the same disease.

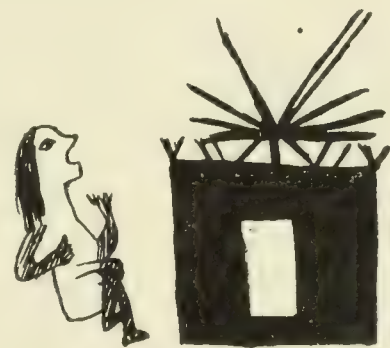


FIG. 103—Summer 1849—Cholera sun dance.

This was during the great cholera epidemic that swept the country in the spring and summer of 1849, which was carried to the plains by the California and Oregon emigrants and by some of the tribes then in process of removal from the east. The Kiowa remember this as the most terrible experience within their history, far exceeding in fatality the smallpox of nine years before. It was a disease before entirely unknown to them, and was particularly dreaded on account of its dreadful suddenness, men who had been in perfect health in the morning being dead a few hours later. The disease appeared immediately after the sun dance, which was held on Mule creek (*Ādóü P'a*, "Tipi wind-break river"), between Medicine-lodge creek and the Salt fork of the Arkansas, and, like the previous smallpox, it was brought by visiting Osage who attended the dance. During the performance a man

became inspired or "crazy," as in the ghost dance, and prophesied that something terrible was about to happen after the *taíme* had been returned to its box. Hardly was the dance over and the *taíme* put away when a man was attacked by this strange disease and died in a few hours; then another became sick and died as suddenly, and another, until in a few days the epidemic spread through the tribe, killing great numbers, including an unusual proportion of medicine-men. The Kiowa say that half their number perished during its prevalence; this is probably an exaggeration, but whole families and camps were exterminated and their tipis were left standing empty and deserted. Many in their despair committed suicide, but the survivors saved themselves by scattering in different directions until the disease had spent its fury.

The tribes of the lake region and those which had been recently removed to Indian Territory generally escaped the disease, but among the wild tribes of the plains, from the Dakota to the Comanche, the ravages of the cholera during this season were as awful as among



FIG. 104 — Cholera
(from the Dakota calendars).

the white population of the eastern states. The western Dakota, who suffered severely, believed that the disease had been deliberately introduced by the whites for their more speedy extermination (*Report*, 78). The agent for the Pawnee states that up to June of 1849 twelve hundred and thirty-four persons, or nearly one-fourth of the tribe, had already died, and the disease was still making fearful ravages among them, while the survivors were in such dread of the terrible scourge that no persuasion could induce them to bury the dead, and within a short distance of the agency it was not unusual to find the unburied corpses partially devoured by wolves (*Report*, 79).

In the spring of 1850 an attempt was made to assemble the tribes of the southern plains for the purpose of making treaties with them to insure the safety of the emigrant roads. The Comanche, however, declined to attend on account of the cholera, which they said their medicine-men had predicted would be communicated to them again by the whites unless they kept at a proper distance until the grass had died in the fall, when the cholera would die out with it, and they would no longer be afraid to meet their white friends (*Report*, 80). This caused a postponement of the negotiations, which resulted later in the treaties of Fort Laramie in 1851 and Fort Atkinson in 1853.

WINTER 1849-50

The Kiowa killed several of the Pawnee and were received by their friends with a dance on returning to camp. The figure over the winter mark (figure 105) represents a Pawnee, as shown by the peculiar shaving

of the head, with two long scalp-locks or "horns." In this connection Dunbar says:

The name Pawnee is most probably derived from *párikí*, a horn, and seems to have been once used by the Pawnees themselves to designate their peculiar scalp lock. From the fact that this was the most noticeable feature in their costume the name came naturally to be the denominative term of the tribe (*Clark, 18*. See also summers 1841 and 1851, and winter 1852-53).

The half circle above represents the circle of dancers opening in the direction from which the warriors are returning, and the cross in the center represents a fire made of a pile of buffalo chips around which they danced.

The Kiowa were camped in two divisions near the Salt fork of Arkansas river when a war party of Pawnee stole the horses of the first camp, whose warriors at once started in pursuit. In the meantime another party of Pawnee stole a number of horses from the Kiowa at the other camp, who also sent their warriors in pursuit of the thieves. The first Kiowa party overtook the Pawnee warriors, dismounted, and attacked them, killing one. While this was transpiring the other band of the Pawnee came up in the rear and stole the horses from which the riders had dismounted to fight. The second Kiowa party, coming up behind the Pawnee, at once attacked them, killed four, and recovered nearly all the horses.

As the victorious Kiowa warriors approached their home camp after this double pursuit and encounter, they imitated the cry of a wolf, to let their friends know that they had killed some of the Pawnee—designated as "Wolf-people" in the Kiowa language and in the sign language of the plains—and their friends at once formed the circle and began the dance to receive them, as indicated in the figure. The dance performed on this occasion is a peculiar one, with a particularly pleasing song accompaniment.

The scalp dance is called *Á'daldá-gúǎn*, literally "hair-kill dance." Should one of the war party have been killed, all the others go into mourning (*dóát*) and do not rejoice or paint themselves as they return, even though bringing back a scalp. In this case they hold no dance, but sacrifice the scalp to the sun by "throwing it away" on some hill-side. If, on the contrary, they have taken one or more scalps without the loss of one of their own party, they return to camp in full war dress, including their war bonnets, and with faces painted black, to show that they have killed an enemy. They enter the camp running, to imitate a charge, firing their guns and discharging arrows, to show how they had met and struck the foe; if they approached in silence, they might be mistaken for enemies. Their friends run out to meet them, shouting "*Ímkágyü'gya!*" ("They are coming in triumph!"), and at once commence preparations for the dance. The entry is generally made in the morning, or perhaps just after noon, in order to give plenty of time to prepare for the dance; should they reach the camp late in the evening,

the entry is postponed until the next morning. The warriors take the women up behind them on their horses and ride around the circle singing, while the scalps, stretched over hoops and painted red on the inside, are carried at the ends of poles about 6 feet long by other women in the dance; at night a fire is built in the center of the circle. As the interpreter said, in his quaint English, "Everybody very happy time like picnic." No men excepting those of the returned war party engage in the dance, but all the women take part. The dance may continue every afternoon and night for a month, after which the scalp is usually "thrown away" in some unfrequented spot by fastening it to the branch of a tree, or to the end of a pole planted on the hillside, with a prayer offering it to the sun. This act of sacrifice was called *pä'ñgun*, a word signifying "to give by throwing away."



FIG. 105—Winter 1849-50—Dance over slain Pawnee.

They were sighted by the Crow scouts at some distance below and mistaken for Sioux, whereupon the latter made a tragical rush for our camp to give the alarm. As they appeared in view across the valley running in single file at a lively speed, occasionally deviating from a direct line to describe a small circle indicating that they had seen an enemy, quite an excitement was aroused in the camp. The soldiers gathered in throngs, while the Crows formed in line, shoulder to shoulder, behind a pile of buffalo chips placed for the purpose and stood there swaying their bodies and singing while the scouts approached. As the leader of the scouts came up he paused to kick over the pile of buffalo chips, which was equivalent to a solemn pledge to tell the truth, then sat down surrounded by his fellow Crows, and after resting a minute or two, told what he had seen (*Montana*, 1.)

SUMMER 1850

Ä'götü K'ádó, "Chinaberry sun dance," so called because held near a thicket of these trees on Beaver creek (*P'o P'a*) or upper North Canadian river, a short distance above the junction of Wolf creek at Fort Supply, Oklahoma. In the figure the tree above the medicine lodge represents the chinaberry tree with its leaves and berries. No other event is recorded in connection with this summer.



FIG. 106—Summer 1850—Chinaberry sun dance.

WINTER 1850-51

Taŋgiápá Ehótal-de Sai, "Winter that Taŋgiapa was killed." The bust above the winter mark represents the man killed, whose name,

signifying a male deer, is indicated by the connected figure of a male (horned) deer.

He had led a small war party into Tamaulipas or the adjacent region beyond the Rio Grande. They overtook a party of Mexicans, and Tañgiapa, who was mounted, was pursuing a Mexican on foot and was just about to stab him with a lance when the Mexican turned and shot him through the body, and was himself immediately killed by the Kiowa warrior. Tañgiapa was carried into the mountains, where he died the same evening. No other Indian was killed.

SUMMER 1851

Pañ K'ádó, "Dusty sun dance." It was held on the north bank of the North Canadian, just below the junction of Wolf creek, near where the last sun dance had taken place. It is so called on account of a strong wind that prevailed during the ceremony, which kept the air filled with dust.

When the dance was over and the Kiowa had left the spot and gone northward toward the Arkansas, a band of the Pawnee came to the place and stole from the center pole of the medicine lodge the offerings which had been hung upon it as a sacrifice, including a number of blankets and a flag which had been given by the Kiowa to the Osage when the two tribes had made peace in 1834. The figure over the medicine lodge represents a Pawnee—indicated by the peculiar scalplock, as already described—holding a flag in his hand.



FIG. 108—Summer 1851—Dusty sun dance; flag stolen.

present. The Kiowa took the bags upon their horses, but as they went along, knowing well the tricky character of their ostensible

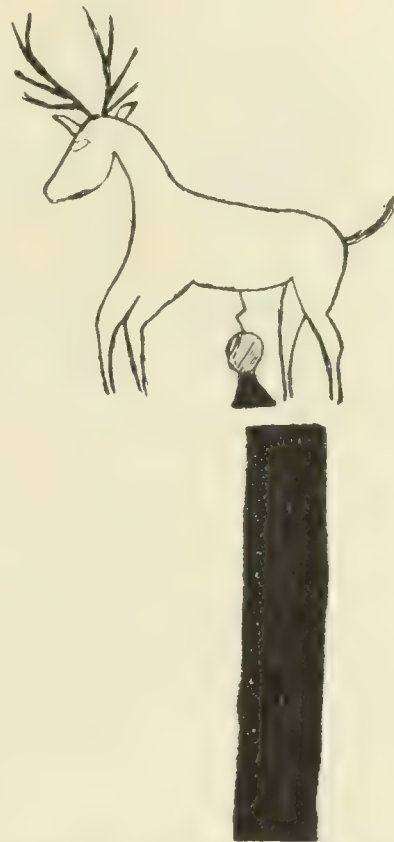


FIG. 107—Winter 1850-51—Buck-deer killed.

The Pawnee followed the trail of the Kiowa, and on coming near them set fire to the prairie to attract their attention. Two young men of the Kiowa went out to learn the cause of the fire and found the Pawnee party, who said that they had come with presents and goods to make peace and to trade with the Kiowa. The young men rejoined their party with the news, and the Kiowa, under chiefs Dohasän and Set-ängya, turned back to meet the Pawnee band and escort them to a camping place. As the latter were on foot, in accordance with their usual custom, they asked the Kiowa to carry for them the skin bags which they said contained the

friends, they opened several of the bags and found them filled, some with buffalo chips for fuel, and others with arrows, showing that the Pawnee force had come to fight as soon as a favorable opportunity offered. Disgusted by this treachery, they at once attacked and defeated them, killed the chief, who wore a shell gorget, and captured a boy, who was taken by Set-ängya himself. It was an expensive capture, however, as will appear later. The Kiowa lost two prominent men, Set-ägyaí, "Bear-on-trees," and Tén-ät'ánte, "Little-heart." The fight occurred in Kansas, north of the head of Medicine-lodge creek.



FIG. 109—Winter 1851-52—Woman frozen.

WINTER 1851-52

Mä'ñyí Dó'gyähón-de Sai, "Winter the woman was frozen." The figure over the winter mark represents the woman, indicated by the dress and belt with disks of German silver.

During the winter the present chief, Zépko-eét-te, "Big-bow," then a young man, stole a very pretty woman whose husband was away on the warpath, and took her to his own home camp. On coming near his father's tipi he concealed the woman among the trees and went into the tipi to get something to eat before going on. His father, who knew what he had done, held him and prevented his return to the woman waiting outside, who remained there exposed to the extreme cold until her feet were frozen.

To "steal" a woman is to elope with or take possession of her in a manner contrary to tribal usage, i. e., secretly and without having made the customary presents to her relatives by which the transaction becomes ratified as a marriage.

SUMMER 1852

Á'pütáte (K'a-t'ógyä or Háñt'ógyä-k'ía) Ehótal-de Pai, "Summer that Touch-the-clouds (Knife-shirt, or Iron-shirt-man) was killed." There was no sun dance this year. The Pawnee warriors killed a Cheyenne chief who wore a cuirass. The cross marks over the human figure represent the cuirass, and the tree with leaves shows that it occurred during the summer.

At a great Cheyenne camp upon a stream, apparently in Kansas or Nebraska, known to the Kiowa as *Há'ñtso P'a*, "Cannon-ball (literally, metal rock) river," the Cheyenne, Arapaho, and some Dakota had made medicine for a combined expedition against the Pawnee, to which they invited the Kiowa and Apache, who were

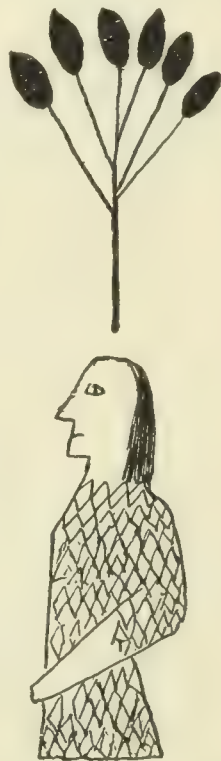


FIG. 110—Summer 1852—Iron-shirt killed.

camped at the time on *Koñyü'daldü P'a*, "Black-hill river," in Kansas, north of the Arkansas. About half the warriors of the two latter tribes accepted the invitation, and the united force, moving with all their women, children, and tipi outfits, started against the Pawnee. They met the enemy, but were defeated, with the loss of the Cheyenne chief *Wóífdóish*, "Touch-the-clouds," called by the Kiowa *Á'pätáte*, "Far-up," otherwise known as *Hañt'ógyä-k'ía*, "Iron-shirt-man," from a cuirass which he wore and which had probably been procured originally from Mexico, where the Kiowa once captured another.

The official report for the year thus notices the encounter:

A war party of Osages, Kioways, and Kaws, consisting of about four hundred warriors, went in pursuit of the Pawnees while out on their last hunt. They overtook the Pawnees and attacked them, but, being greatly outnumbered by the Pawnees, they ingloriously fled, leaving on the ground one war chief killed, and having killed and scalped one Pawnee woman (*Report*, 81).

WINTER 1852-53

The Pawnee boy captured by *Set-ängya* in the summer of 1851 escaped, taking with him two horses, including the finest one in the tribe, a bay race horse known as *Gúädal-tséyu*, "Little-red" or "Red-pet." The figure above the winter mark

shows the Pawnee boy, distinguished by the peculiar headdress of his tribe, holding the bay (red)

horse by the halter. The importance of the horse to the equestrian Kiowa is shown by the fact that this is recorded as the important event of the winter.

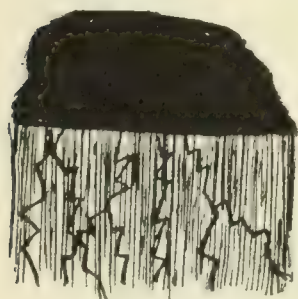


FIG. 112—Summer 1853—
Showery sun dance.



FIG. 111—Winter 1852-53—
Gúädal-tséyu stolen.

SUMMER 1853

Bíäsoṭ K'ádó, "Showery sun dance," so called because there were continual showers during the dance. The figure above the medicine lodge is intended to represent the drizzling rain descending from the black clouds overhead, with occasional red flashes of lightning. Compare the corresponding rain and cloud symbols given below. The dance

was held at the same place where the "dusty" sun dance was celebrated in 1851, near the present Fort Supply.

This sun dance is distinguished for a deliberate violation of the *taíme* rules by Ten-piák'ia, "Heart-eater," a noted warrior and medicine-man,

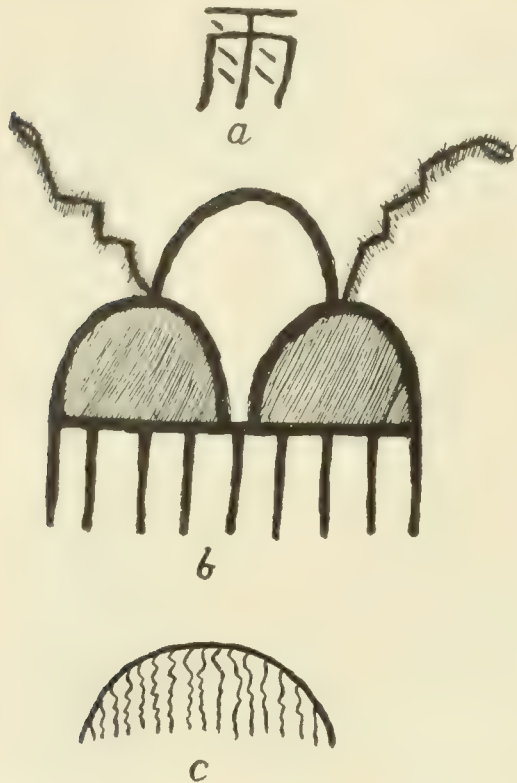


FIG. 113—Rain symbols (*a* Chinese; *b* Hopi; *c* Ojibwa).

rival of Ansó'te, the *taíme* keeper, and father of Set-t'an, the author of this calendar. One of the strictest regulations of the sun dance was the taboo against mirrors, which form part of the toilet equipment of nearly every Indian, but which must not even be brought near the *taíme* of the Kiowa. Notwithstanding this, Ten-piák'ia, in defiance of the medicine and its priest, deliberately rode around inside the circle with a small mirror while the *taíme* was exposed, and afterward tried to poison Ansó'te by scraping off the mercury from the back and mixing it with some tobacco which he gave to the priest to smoke. Ansó'te took one puff, but detecting something wrong, put away the pipe, saying, "There is something there of which

I am afraid." Soon afterward Ten-piák'ia, while hunting buffalo, was thrown from his horse and killed, which was regarded as a speedy punishment of his sacrilege.

Although Indian tradition records frequent instances of careless and unthinking neglect of some of the numerous taboos and other regulations in connection with sacred matters, such a deliberate defiance of their ordinances is almost unexampled; more rare, indeed, than heresy in the old days when Europe held but one religious doctrine. It is of interest as showing that even among savages attempts are sometimes made by bolder spirits to break away from the bonds of mental slavery. A somewhat similar incident is recorded for 1861.

WINTER 1853-54

Soon after the last sun dance a war party went into Chihuahua (*Toñhéñ-t'á'ká-i-dómbé*, "waterless Mexican country"), east of the Sierra Madre, where they met and attacked a mule train. The Mexicans made a circle of the wagons, with the mules on the inside, and prepared to defend themselves. A distinguished warrior named Pá'ñgyägiäte succeeded in entering the circle and was striking the mules with his bow, equivalent to putting his seal of ownership upon all thus struck, when he was shot and killed by a

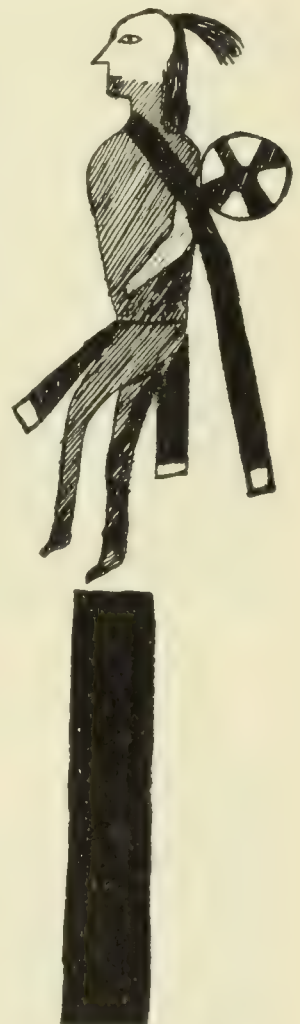
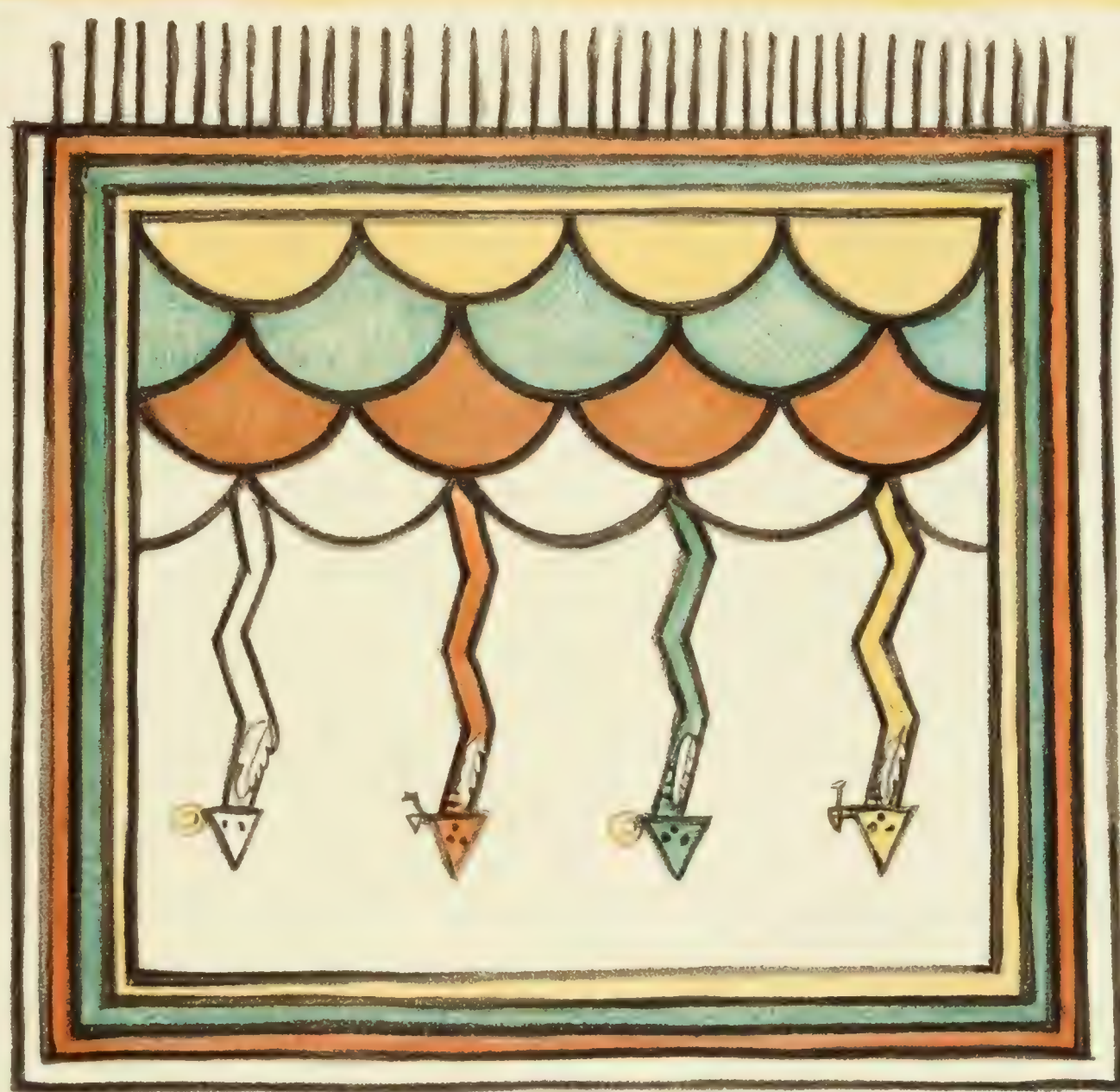


FIG. 114—Winter 1853-54—Pä'ñgyägiäte killed.



SAND MOSAIC OF THE HOPI ANTELOPE PRIESTS, (AFTER FEWKES)

Mexican who had approached him unseen. No other Kiowa was killed. Pá-tadal was one of this party.

The man killed was one of the Kâ'itséñko (see summer 1846), as indicated by the headdress and the red sash of the order pendent from his shoulder. He is further designated by his shield—represented hanging at his side—which was made by Äk'ódalte, "Feather-necklace," and the picture of which is at once recognized by the old warriors of the tribe. The name Pä'ñgyägiäte may be rendered "Sacrifice" or "Sacrifice-man," from *pä'ñgyä*, a sacrifice or offering "thrown away" on the hills as a gift to the sun.

SUMMER 1854

Äyü'daldü' P'a K'ádó, "Timber-mountain creek sun dance." This dance was held upon the creek upon which the most important treaty of the Kiowa was afterward made (see winter 1867-68). The event of the summer was the killing of Black-horse by the Sauk and other allied tribes.

The brother of Set-ïmkía, "Pushing-bear," more commonly known as Stumbling-bear, had been killed by the Pawnee, and at this dance he sent the pipe around as a summons for a great expedition against that tribe. Other tribes were invited to join the Kiowa, and a large war party set out, consisting of several hundred warriors of seven tribes—Kiowa, Apache, Comanche, Cheyenne, Arapaho, Osage, and some Crows. They crossed the Arkansas and proceeded to the north-east until they reached *Gúigyä P'a*, "Pawnee river" (Smoky Hill), where they met a small party of about eighty *Sükíbo* (i. e., Sauk and Fox), with a few Potawatomi, three cognate tribes which had been removed from beyond the Mississippi to reservations in eastern Kansas. The latter advanced against the Kiowa, who summoned them to halt, but notwithstanding the great disparity in numbers, the eastern Indians at once attacked the prairie warriors. Securing a sheltered position, and being all well armed with rifles with which "they hit every time," while the Kiowa and their allies were in the open prairie and armed chiefly with bows, the Sauk not only kept them off but defeated them with the loss of about twenty killed, among whom were twelve of the Kiowa, including Tseñ-kónkyä, "Black-horse," a prominent war chief.

This is the story as given by the Kiowa themselves, who ascribe their disastrous defeat by a comparative handful of men to the rifles in the hands of the Sauk warriors. This battle occurred either on Smoky-hill or Saline river, in Kansas, about midway between the present Fort Harker and Fort Hays.



FIG. 115—Summer 1854—
Black-horse killed.

Although Set-inkia says that the expedition was originally organized against the Pawnee to avenge the killing of his brother by that tribe, other informants state that it was organized and led by Tseñ-kónkyä, the man who was killed, for the special purpose of exterminating the immigrant tribes, and this statement agrees with the official accounts. The Indian Report for 1854 contains an extended notice of this great war party, which went after wool and came back shorn.

In the summer of that year the agent for the southern plains tribes started for the Indian rendezvous near Fort Atkinson, on the Arkansas, with a large train of goods for distribution in accordance with the terms of the treaty made at that point in the previous year, having first sent messengers ahead to inform the Indians of his approach.

The Indians were encamped on Pawnee fork, at the crossing of the Santa Fé road, where they were collected in larger numbers than had ever been known to assemble on the Arkansas before. Old traders estimate the number at twelve to fifteen hundred lodges, and the horses and mules at from forty to fifty thousand head. The entire Kiowa and Prairie Comanches were there; several hundred of Texas or Woods Comanches had come over; the Prairie Apaches, one band of Arapahoes and two bands of Cheyennes and the Osages composed the grand council. They had met for the purpose of forming a war party, in order, as they in their strong language said, to *wipe out* all frontier Indians they could find on the plains. Two days previous to my arrival they broke up camp and started north. As soon as I heard that they were gone I sent two runners to try and bring them back. They, however, declined coming, and sent word that they would soon return, as it would take but a short time to clear the plains of all frontier Indians. They were doomed to be disappointed, as other nations, great in their own imaginations, have been. At some place near Kansas river they met about one hundred Sac and Fox Indians and the fight commenced, and from their own account lasted about three hours, when, to their great surprise, the combined forces were compelled to retreat, leaving their dead on the field, which Indians never do unless badly whipped. They report their loss at about sixteen killed and one hundred wounded. From the best information I can get, the Sacs and Foxes were as much surprised at the result as the others, for there is no doubt but that they would have run too if they could have seen a hole to get out at. They had taken shelter in a ravine and were for a long time surrounded. The prairie Indians were armed with the bow and arrow, while the others had fine rifles. One is a formidable weapon in close quarters, but worthless at more than about fifty yards. The rifle told almost every shot. It is easily accounted for why one hundred whipped fifteen hundred. The former had a weapon to fight with; the latter had none at the distance they were fighting. I learn that the Sacs and Foxes lost six killed, but they were killed with the rifle. The Osages have fine guns, and they must have shot them, for I am certain the other Indians have nothing in the shape of guns, except a few Northwest shotguns, and they are of but little use. The Sacs and Foxes are satisfied that the Osages did them the only damage they received, and as an evidence I learn that war has been declared between the nations, and already some scalps have been taken. This may save the government from whipping them (the Osages), as it is certain somebody will have it to do soon (*Report, 82*).

In his report for the same year the Indian superintendent says:

I am officially advised that on the arrival of Agent Whitfield at Fort Atkinson, on the Arkansas river, with the annuity goods for the Comanches, Kiowas, and Apaches, in July last, he found that they had all gone on a war party against the tribes of the north, confident from their numbers, estimated at fifteen hundred, to gain an easy

victory over any tribes they should encounter. In the vicinity of Smoky Hill they came up with a party of Sacs and Foxes and a few Pottawatomies, the whole not exceeding two hundred [*sic*] in number. The Comanches, believing, to use the words of one of their chiefs, that they could "eat up" so small a force in a few minutes, made a general charge. The Sacs allowed them to approach until within a hundred yards, when they opened upon them a well-directed fire from their rifles, which, being unexpected, appalled, and for the moment checked, their assailants. Three times these charges were repeated, and each time with a like fatal result. The Comanches at length retired, crestfallen and dispirited, having twenty-six killed and over one hundred wounded. On their return to Fort Atkinson their appearance and deportment were quite changed. They seemed humble and dejected, and quietly and submissively received their annuities and retired. The loss of the Sacs and Foxes is reported to be very inconsiderable (*Report, 83*).

The agent for the Sac and Fox tribes gives a sequel which illustrates Indian vengeance:

On the second of August, by the request of the chiefs and head men of the Sac and Fox tribe of Indians, I reported to the honorable Commissioner of Indian Affairs, through your office, an account of an attack made on the Sacs and Foxes by the Comanches, Arapahoes, and Osages, about the tenth of July, one hundred miles west of Fort Riley. Some five or six days ago a Sac Indian, who had a brother killed in that battle, left here by himself, went within four hundred yards of an Osage encampment, met two Osage men, shot one down and went up and scalped him; could have killed the other, but wished him to live to carry the news of what he had done to the Osage camp; waited until he had done so; heard the cries and lamentations of those in the camp for their dead kinsman, mounted his horse and returned with his scalp. The nation immediately upon his return moved to within a mile of the agency, where they are now dancing with joy and triumph over the trophy brought back in this warlike achievement to them (*Report, 84*).

Whirlwind, the famous war chief of the southern Cheyenne, who died in 1895, had every feather shot away from his war bonnet in this engagement, which he always declared was the hardest fight he had ever been in. Notwithstanding this, he was not wounded, owing to the protecting power of a medicine hawk which he wore upon his war bonnet! He said:

When all the feathers were shot away the hawk was not hit. Balls went to the right and left, above and below me. I was mounted and the Sacs and Foxes were on foot in a hollow like a buffalo wallow. It was the Great Spirit and the hawk which protected me (*Clark, 15*).

WINTER 1854-55

Gyaíkoaónte "Likes-enemies," is killed by the Ä'lähó. He is identified in the picture by his shield, which is recognized as one made by Set-pate, "He-bear," and by the collar of the Káitséñko, to which order he belonged. The zigzag stroke touching his breast is intended to show that he was killed by a bullet.

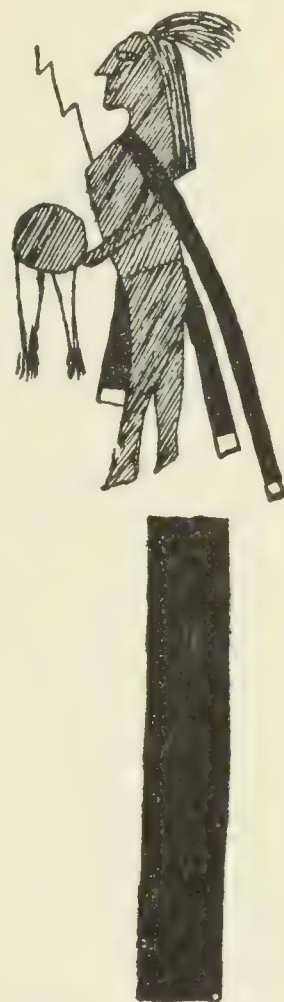


FIG. 116—Winter
1854-55—G y a í -
'koaónte killed.

According to one statement, the Kiowa warriors had gone against the Osage on Arkansas river and found their camp with a number of horses



FIG. 117—Summer 1855—Sitting summer.

hobbled near by. They waited until night and then made an attempt to steal the horses, but were ambuscaded by the Osage and this man was killed. Another informant states that the Indians concerned were not the Osage (*K'apü'to*, "Shaved-heads,") but the *Ä'lähó* (Kwapa? Omaha?), described as a tribe living to the northward of the Osage and similar to them in language and costume. As the Kiowa generally state that they have been friends with the Osage since the peace of 1834, and more particularly as they had been allies against the Sauk only a few months before this occurrence, the latter story is probably correct.

SUMMER 1855

Toñguáyo Paídă, "Summer of sitting with legs crossed and extended." For some reason the word for summer is here used in the plural form. The figure is sufficiently suggestive. There was no sun dance this summer. The weather was extremely hot and the grass dried up, in consequence of which the horses became so weak that when traveling the Kiowa were frequently obliged to halt and sit down to allow the animals to rest.

WINTER 1855-56

Ä'daltoñ-édal, "Big-head," the brother of *Gyaíkoaónte*, who had been killed by the *Ä'lähó* (? see ante) in the preceding winter, after having cried all summer, went this winter for revenge, met an *Ä'lähó* (or an Osage?) hunting buffalo, and killed him.

The figure with a bow above the winter mark represents *A'daltoñ-édal*, indicated by the head above the head of the figure, while in front of him is the Osage (?), with the arrow in his breast and the blood pouring from his mouth. The headdress is like that hitherto used to indicate a Pawnee, both tribes wearing the head shaved, leaving a crest. During this winter also a war party went into Chihuahua and



FIG. 118—Winter 1855-56—Big-head kills an *Ä'lähó*.

brought back a large number of horses, but lost one man, "Going-on-the-road."

SUMMER 1856

Séñ-äló K'ádó, "Prickly-pear sun dance." The prickly-pears or tunas (*Opuntia tortispina* ?) are shown above the medicine lodge. This dance was held at a place where there was an abundance of prickly-pears, at the mouth of a small creek, probably Caddo or Rate creek, entering Arkansas river about 10 miles below Bent's fort, in Colorado. It was held late in the fall, when the prickly-pears were ripe, instead of in midsummer, as usual, and the women gathered a large quantity. This circumstance has given the distinctive name to the *k'ádó*. The sweet fruit of the tuna is much prized by the Indians, who eat it raw, while the fleshy leaves are used as a mordant in their painting upon buckskin.



FIG. 119—Summer 1856—
Prickly-pear sun
dance.

WINTER 1856-57

Dó-gyäkódal-de Sai, "Winter that they left their tipis behind." The two tipis above the winter mark are intended to convey the idea.

After the last sun dance, while the Kiowa, Cheyenne, and Arapaho were still camped near Bent's fort, a Kiowa war party under Big-bow and Stumbling-bear went against the Navaho, while the rest, men and women, under old Lone-wolf, went after buffalo, leaving their tipis rolled up in care of Bent. On their return they found the Cheyenne in possession of their tipis, and on complaining to Bent he said, "I have given them to my people" (i. e., the Cheyenne). A quarrel ensued, in which the Cheyenne shot Lone-wolf's horse and slightly wounded one Kiowa and drove the others away, retaining possession of the tipis. This appears to have been the most serious break between the two tribes since they had made peace in 1840.

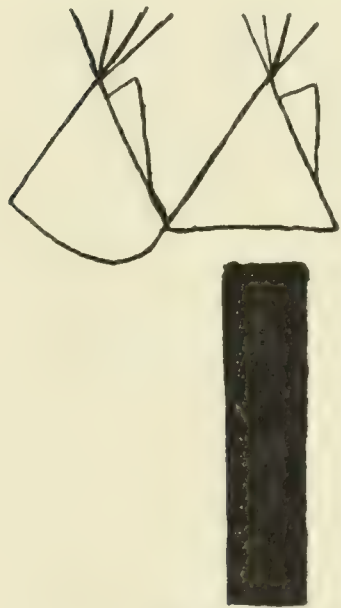


FIG. 120—Winter 1856-
57—Tipis left.

SUMMER 1857

Ä'potó Ek'üädä'-de K'ádó, "Sun dance when the forked stick sprouted." The figure (121) represents a forked stick, with leaves, growing out from the side of the medicine lodge.

This dance was held on the north side of Salt fork of the Arkansas (*Ätüntai P'a*, "Salt river") at a small creek, probably Elm creek, a considerable distance below upper Mule creek (*Ädóü P'a*) in Oklahoma. A Kiowa named *K'ayä'n̄te*, "Falls-over-a-bank," owned a sacred *ä'poto*, or two-pronged stick of *ä'gótä* or chinaberry wood about four feet long,

trimmed with wild sage, which had been given him by his uncle Kónā-bĩnate or Kónate, "Black-tripe." It was his medicine, which he carried publicly only in the sun dance, and no one else had such a stick. He carried it on this occasion, keeping time to the dance with it, and at the end of the ceremony planted it, with the fork down, inside the medicine lodge as a sacrifice. On returning to the place next year the Kiowa found that it had been reversed by someone and had taken root and put forth green leaves. This was the more remarkable, as it had previously been stripped of its bark. The news of the phenomenon spread through the tribe and confirmed the previous impression concerning the mysterious powers of the *ä'poto*. Ten years later, on the occasion of the treaty of Medicine Lodge, the Kiowa visited the spot and found that the rod had grown into a tree and was still alive. It is just possible that K'ayä'ñte, who is still living, could explain the matter.

After this dance two war parties started out, one against the *Pä'sũñko* (*Paseños*, Mexicans of El Paso), and another, consisting principally of Comanche under the chief Mäwi, against the Sauk and Fox

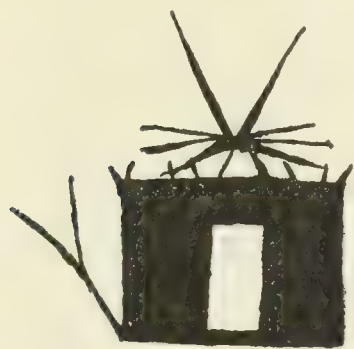


FIG. 121.—Summer 1857—
Forked-stick-sprouting
sun dance.

tribes, who had so badly punished them three years before. They met the Sauk northeast of the scene of the former battle and had an engagement in which several of the Sauk were killed. Gaápiatañ was one of this party. No mention of these expeditions occurs in the official reports.

The story of the origin of the *ä'poto* staff is romantic, and throws light upon several interesting points of Indian belief and custom. Eighteen years before this sun dance (i. e., in 1839) a small party of about twenty Kiowa warriors led by Gúädalóñte, "Painted-red," started against the *Pä'sũñko*, already mentioned. The old chief Dohasän accompanied the party, but not as leader. It should be noted that usually every war party had a substitute leader or lieutenant, who took command in case of the death of the leader. For some reason they made no attack upon El Paso, probably because they found it too vigilantly guarded, but stayed only one night and started the next day on their return. In the desolate Jornada del Muerto, between the lower Pecos and the Rio Grande, they halted for the night at a spring coming out of a cave since known to the Kiowa as *Tsó-dói-gyätä'dä'-dée*, "the rock house (cave) in which they were surrounded." None of the Kiowa can define its exact location, but they describe it as a deep rock well with a large basin of water, and on one side of it a cave running under the rock from the water's edge. Pope's statement shows it to have been the Hueco Tanks, in western Texas, just south of the New Mexico line. While resting there they were surrounded by a large force of Mexican soldiers, who killed several of their horses and forced them to take refuge in the cave. The Mexicans had with them several Mescalero

Indians (E'sikwita), who, however, were rather doubtful allies, as one of them, who spoke Comanche, shouted to the Kiowa in that language, encouraging them to hold out.

On being driven into the cave the Kiowa found themselves cut off from both food and water. They were watched so closely by the Mexicans that they could only venture out to the edge of the water under cover of darkness to get a hasty drink or cut from the dead horses a few strips of putrefying flesh, which they had to eat raw. One man was shot in the leg while thus endeavoring to obtain water. From the stench of the dead horses, and the hunger, thirst, and watchfulness, they were soon reduced to a terrible condition of suffering.

On exploring the cave to see if there might be any means of escape, they found that it extended a considerable distance, and at the farther end was a hole opening to the surface. One of them climbed up and thrust his head out of the opening, but was seen by the soldiers, who at once effectually closed the hole. It was evident that the Mexicans were afraid to attack the Indians and were determined to keep them penned up until they were starved. To add to their distress, the decaying carcasses of the horses soon made the water unfit to drink. After ten days of suffering they realized that a longer stay meant dying in the cave, and it was resolved to make a desperate attempt to escape that night.

The sides of the well were steep and difficult, but they had noticed a cedar growing from a crevice in the rock, the top of which reached nearly to the height of the cliff, and it seemed just possible that by its means they might be able to climb out. That night, after dark, they made the attempt and succeeded in gaining the top without being discovered by the soldiers on guard. One only, the man who had been shot in the leg, was unable to climb. He implored his comrades to take him with them, but finding that impossible, they answered that it was his life against theirs and if they remained with him or lost time in trying to get him out they would all perish together. They urged him to have a strong heart and die like a warrior; he calmly accepted the inevitable, saying only, "When you get home, tell my comrades to come back and avenge me." Then he sat down by the side of the well to await death when daylight should reveal him to his enemies. His name, Dágoi, deserves to be remembered.

Dohasän was the first to reach the top; he belonged to the Kâitséñko, and it is said that before leaving the cave he had sung the song of that warrior order in which they bid defiance to death, the same which Set-ängya afterward chanted before he sprang upon the guard and was riddled with bullets by the soldiers.

As they emerged they saw the fires of their enemies burning in various directions about the mouth of the cave. The Indians were sheltered by the darkness, but some of the soldiers heard a slight noise and fired at random in that direction, and seriously wounded Koñate,

who was shot through the body. The Kiowa succeeded in making their escape, probably helping themselves to some of the Mexican horses, and carried with them their wounded comrade until they reached a noted spring, perhaps on the edge of the Staked plain, known as *Pai-k'op tóñtep*, "Sun-mountain spring," from its circular shape and its situation on the top of a mountain. By this time Koñate's wounds were in such condition that it seemed only a question of a few hours when he would die. Finding themselves unable to carry him in his helpless condition across the desolate plains, his friends reluctantly decided to leave him to his fate. Placing him within reach of the water, they raised over him an arbor of branches to shield him from the sun, and rode away, intending on reaching home to send back a party, in accordance with their custom, to bring back his bones for burial.

Deserted by his companions, his wounds putrefying under the hot sun, Koñate lay stretched out by the spring silently awaiting the end. The sun went down and day faded into night, when far off on the hillside he heard the cry of a wolf; the wounded man roused himself from his stupor and listened; again he heard the cry of the wolf, but this time from another direction and evidently near; despair seized him as he realized that the coyotes had scented their prey and were gathering to the feast, and now he heard the patter of the light feet and the sniffing of the animal as a wolf prowled around him; but instead of springing upon the helpless man and tearing him in pieces, the wolf came up and gently licked his wounds, then quietly lay down beside him.

Now he heard another sound in the distance, the *tsó dal-tem*, or eagle-bone whistle of the sun dance; it approached, and he heard the song of the *k'ádó*, and at last the spirit of the *taíme* stood before him and said: "I pity you, and shall not let you die, but you shall see your home and friends again." The *taíme* then sent a heavy rain to clear out his wounds and afterward talked long with him, giving him instructions for a new shield and conferring upon him mysterious powers of medicine, of which the proof and emblem should be the *ü'poto* staff, which he instructed him to make after his return. Then the spirit left him, saying, "Help is near." The Kiowa insist that all this was not a dream or vision, but an actual waking occurrence; but of course most of it was the delirium of fever.

As his comrades proceeded on their way, they met six Comanche warriors on their way to Mexico, to whom they told the story of their encounter, also that they would find Koñate's dead body at the spring, and asked them to cover it from the wolves. Then they parted, the Kiowa continuing on to the northward, while the Comanche proceeded toward the spring, where they intended to camp for the night. On arriving, they were astonished to find Koñate alive and in somewhat better condition than when his comrades had left him. Seeing that there was a chance of saving his life, the Comanche washed his wounds and fed him; next morning they put him upon one of their extra horses,

and abandoning their proposed raid turned back and brought him safely to his friends and tribe, where he fully recovered and lived for many years. A few years after his return he made several shields, as directed by the *taíme*, one of which still exists in possession of Dr J. D. Glennan, U. S. A., now stationed at Fort Clark, Texas; he also made the sacred *ä'poto*, which he carried for some time in the annual sun dance, and afterward bestowed it upon his son (i. e., nephew) K'a-yä'ñti, who still lives, now an old man. Koñáte subsequently assumed the name of Pá-tadal, "Lean-bull," which he conferred later on its present owner, commonly known to the whites as Poor-buffalo.

Captain Pope, who visited the Hueco tanks in 1854, describes the peculiar formation of the cave springs and mentions the Gúadalónite fight of some years before, his statements being evidently derived from the Mexicans, who were disposed to magnify their own part in the affair. He says:

Besides the water contained in the tanks there are numerous holes and crevices in the mountains, which contain sufficient for every purpose to last for a considerable time. It is proper to remark that animals can not drink from the tanks; the water is taken out in buckets and thrown down the rocks until all have been supplied. Thus watering is a matter of time and labor. The peculiar formation of these mountains, their innumerable caverns and hiding places, seem to have been intended for a refuge for the Indians; nor have they neglected to avail themselves of its advantages. In one instance, however, they "reckoned without their host." About fourteen years ago these Arabs of New Mexico, the Apaches, having made a desperate foray upon the Mexicans, retreated with their plunder to these mountains. The Mexicans surprised and surrounded them, hemming them up in the rocky ravine forming the eastern tank. Here an engagement took place, in which the Indians were totally defeated and nearly exterminated, only two or three escaping. It is said that upward of one hundred of them were killed (*Pacific Railroad, 1*).

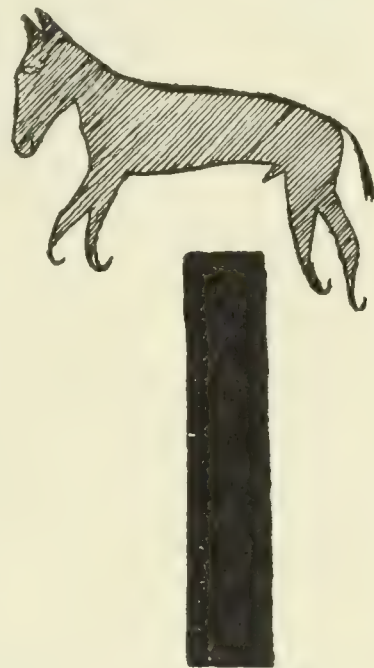


FIG. 122—Winter 1857-58—
Horses stolen.

WINTER 1857-58

The Kiowa camped this winter on Two-butte creek (*Ä'zót P'a*, "Driftwood creek"), a southern tributary of the Arkansas, below Bent's Fort in Colorado. A band of Pawnee came on foot and stole six bunches of horses, including all those of T'ébodal and Set-ängya; among them were three spotted mules. The Kiowa pursued the thieves for three days and came in sight of them at sunset; they intended to strike them next morning and get the stock, but that night a snowstorm came on and stopped the pursuit; however, they killed one Pawnee who had been crippled by the cold. The figure above the winter mark represents the stolen horses.

SUMMER 1858

Ädo-byúñi K'ádó, "Timber-circle sun dance." This dance was held on lower Mule creek, entering the Salt fork of the Arkansas from the

north, near the mouth of Medicine-lodge creek; it was so called because held in a natural circular opening in the timber, as indicated in the figure representing a circle of trees around the medicine lodge.



FIG. 123—Summer 1858—Timber-circle sun dance.

of horses. They had recrossed the Rio Grande and camped on the northern side, when they were attacked at sunrise by a pursuing party of Mexicans. The Indians fled and escaped, excepting *Gúi-k'áte*, "Wolf-lying-down," who rode a mare which was delayed by a colt in following, and was therefore unable to get away from the enemy, who shot and killed him.

Set-t'aiñte and Set-ĩmkía also went against the Ute this fall and found and attacked a single tipi on the upper South Canadian, killing one man and wounding several others.

SUMMER 1859

Ahĩñ-dóha K'ádó, "Cedar-bluff sun dance." The figure at the side of the medicine lodge is intended to represent a cedar tree on a bluff.

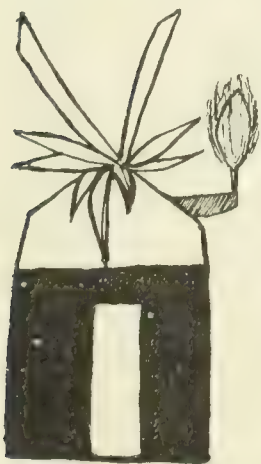


FIG. 125—Summer 1859—Cedar-bluff sun dance.

there had been cut down.

WINTER 1858-59

Gúi-k'áte Ehótal-de Sai, "Winter that Wolf-lying-down was killed." The figure above the winter mark represents a man shot through the body, his name being indicated by the connected figure overhead.

After the last sun dance, the Kiowa warriors made a great raid into Chihuahua and captured a number



FIG. 124—Winter 1858-59—*Gúi-k'áte* killed.

WINTER 1859-60

Gíaká-ite, "Back-hide," died, and a cross was afterward erected over his bones. The figure of the individual, with the cross above his head, explains itself. The *gíáká-i* or "back hide" (see the Glossary) is a piece of rawhide worn over the shoulders by women to protect the back when carrying wood or other burdens.

Gíaká-ite was a very old man, and died on the Staked plain (*Pä-sü'ngya*, "Edge prairie"), at a salt pond called *Tón-kón*, "Black water," perhaps the Agua Negra, just within the Texas boundary. Having become so old and enfeebled in mind and body as to be a continual source of trouble and anxiety, his unfeeling relatives deliberately abandoned him. Shortly before this the old man asked Dohasän, who was of his own family, where they intended to camp next winter. The chief brutally replied, "What is that to you? We shall not take you with us." The poor old man, thinking it a joke, laughed and said, "How can you leave me behind? There are not many chiefs, and you can't afford to lose one." However, on their next move they left him behind to shift for himself, and as he was too feeble to keep up with the party he died alone. Whether he died a lingering death of starvation or met a quicker fate by the coyotes, is unknown; but some time afterward a small war party of the Kiowa, passing near the spot, found his skeleton, over which kind hands—probably Mexican travelers—had erected a rude cross.

The winter before his death, while the Kiowa were on the move somewhere in the same neighborhood, Âdalpepte and his wife, being some distance behind the others, met the old man mounted upon an animal nearly as feeble as its rider, vainly endeavoring to catch up with the main party. It was bitterly cold and he had no blanket. Âdalpepte, unable to endure the sight, generously took off his own buffalo robe and threw it over the old man's shoulders, saying to him, "Take it; I am young and can stand more." Thus, before we make an estimate of Indian character from this story we must decide how far the generosity of the one act offsets the heartless cruelty of the other. It is but fair to state that Gíaká-ite had no immediate relatives who were in condition to help him, as his children were dead and his grandson was but a small boy, so that no one felt directly responsible for his welfare. Abandonment of the aged and helpless was not infrequent among the prairie tribes, but was rather a hard necessity of their wandering life than deliberate cruelty, as generally the aged are treated with the greatest respect and consideration. This is particularly the case among tribes who are less nomadic in habit.



FIG. 126—Winter 1859-60—Gíaká-ite died.

SUMMER 1860

T'ené-badaí, "Bird-appearing," was killed. The figure shows a man shot through the body, with blood streaming from his mouth, while the bird above is intended to indicate his name. As there was no sun dance this year, the medicine lodge is omitted.

A part of the Kiowa tribe was south of the Arkansas, while the rest, with the Kwáhadi and other western Comanche, under the chiefs Täbi-nä'näkä (Hears-the-sun) and Īsä-hä'bīt (Wolf-lying-down), were camped north of that stream, when one day the latter party discovered a large body of people crossing the river. Täbi-nä'näka went out to reconnoiter, and returned with the report that there were a great many of them and that they were probably enemies. The Kiowa and Comanche at once broke camp and fled northward, and on their way met the Cheyenne and Arapaho, to whom they told the news, whereupon the latter also fled with them. By this time it had been discovered that the pursuers were white soldiers, accompanied by a large body of Caddo,



FIG. 127—Summer 1860 — Bird-appearing killed.

Wichita, Tonkawa, and Pénätēka Comanche. As they fled, the Kiowa and their allies kept spies on the lookout, who one night reported their enemies asleep, when they turned and attacked them at daylight, killing a soldier, but losing a Comanche named Silver-knife (properly Tin-knife, *Há'ñt'aiñ-k'á* in Kiowa), who was shot through the neck with an arrow, and a Kiowa named T'ené-badaí, "Bird-appearing," noted for his handsome appearance, who was killed by a Caddo. The engagement took place in Kansas, somewhere northward from Smoky-hill river (*Pe P'a*).

The Pénätēka Comanche lived in Texas, near the settlements, and associated more with the Caddo, Wichita, and whites than with their western kinsmen, the Kwáhadi Comanche, against whom and their allies, the Kiowa and Apache, they several times aided the whites.

There is no direct notice of this engagement in the Indian Report, but the Commissioner states that peace had prevailed among the treaty tribes during the year, with the conspicuous exception of the Kiowa, whose increasing turbulence would seem to render military operations against them advisable. In another place he states that both the Kiowa and Comanche were known to be hostile, and that the army had been ordered to chastise them, as the only way to make them respect their engagements and to stay their murderous hands. In going to Bent's fort, he says:

Citizens of the United States in advance of me as I went out, and also on my return, were brutally murdered and scalped upon the road. It is a fact also worthy of remark that the murders were committed almost within range of the guns at Fort Larned. The Indian mode of warfare, however, is such that it is almost impossible to detect them in their designs. They cautiously approach the Santa Fé road, commit the most atrocious deeds, and flee to the plains (*Report, 85*).

WINTER 1860-61

This winter is known as *Á'dálká-i Dóha Sai*, "Crazy-bluff winter." While the Kiowa were encamped on the south side of the Arkansas, near the western line of Kansas, a man named Gaá-bohónte, "Crow-bonnet," the brother of the man who had been killed by the Caddo the preceding summer, raised a party for revenge. They went to the Caddo camp on the head of Sugar creek, in the present Caddo and Wichita reservation, where they encountered a Caddo looking for his horses. They killed and scalped him, and brought back with them the scalp over which the Kiowa held a scalp dance at a bluff on the south side of Bear creek (*T'á-zótǎ' P'a*, "Antelope-corral river"), near its head, between the Cimarron and the Arkansas, near the western line of Kansas. From the rejoicing on this occasion the place took the name of Foolish, or Crazy bluff.

The picture represents a man with a scalp on a pole, while the projection at the upper end of the winter mark indicates the bluff.

About the same time a war party went into Texas, but lost three men.

The *zótǎ'* or driveway for catching antelope was an open corral of upright logs, stripped of their branches, with an entrance, from which diverged two lines of posts set at short distances from one another and covered with blankets to resemble men. The antelope were surrounded on the prairie and driven toward the corral until they came between the converging lines of posts, when it was an easy matter to force them into the closed circle, where they were slaughtered. The *zótǎ'* was used for catching antelope at any season of the year. It was not used for deer, as the deer could jump over an ordinary corral.

For a description of another method, the *ä't'ákagúá*, or "antelope medicine," see Winter 1848-49. Antelope make regular trails from their shelter places to their grazing grounds, and the Indians sometimes caught them by digging a large pitfall along such a trail—an entire band assisting in the work—and carrying the excavated earth a long distance away, so as to leave no trace on the trail, after which the pitfall was loosely covered with bushes and grass. The hunters then concealed themselves until the herd approached, when they closed in behind and drove the frightened animals forward until they fell into the pit.

Wild horses also were sometimes taken in driveways called *t'á-tséñ-zótǎ'* ("wild-horse driveway"), which were set up near the water holes in the Staked plain, usually in summer, when the streams were dry and the animals were obliged to resort to these places for water. A steep cliff was sometimes utilized to form one side of the corral or driveway. In hunting buffalo the Indians sometimes built converging leadways to the edge of a cliff and then drove the animals over the precipice.



FIG. 128—Winter 1860-61—Crazy-bluff winter.

SUMMER 1861

T'óigúāt Äpüñ'tsep-de K'ádó, "Sun dance when they left the spotted horse tied." The picture shows the spotted or pinto horse tied to the medicine lodge.

This dance was held near a canyon, on the south bank of upper Walnut creek, entering the Arkansas at the Great Bend in Kansas. The event recorded throws another curious light on Indian belief. At the sun dance no one but the *taíme* priest must attempt any "medicine," but on this occasion a man called Dogúatal-edal, "Big-young-man," became "crazy" and committed sacrilegious acts, tearing off his feather headdress and throwing it upon the *taíme* image, and afterward, when they were smoking to the sun, taking the pipe and throwing it away. No reason is given for these strange actions, except that he was temporarily crazy, as he had never acted strangely before, but the Indians believe that, as his conscience troubled him after he came to his



FIG. 129—Summer 1861—
Pinto left tied.

senses, he gave this horse to the *taíme* as an atonement. At the close of the dance he tied a spotted horse to one of the poles inside the medicine lodge and left it there, where it probably died. Such a thing as tying a horse to the medicine lodge had never before been heard of, although a horse was sometimes sacrificed to the sun by tying it to a tree out upon the hills and leaving it there to perish.

The old war chief Gaápiatañ twice sacrificed a horse in this manner, once during the cholera of 1849, when he offered a gray horse as a propitiatory sacrifice for himself, his parents, and brothers and sisters; also again, in the smallpox epidemic of 1861–62 (see next year), he offered a fine black-eared horse, hobbling it and tying it to a tree, with a prayer to the spirit of the disease to take his horse and spare himself and his children and friends. On both occasions his faith appears to have been rewarded, as none of his relatives died. The horse offered on this last occasion was of the kind called *t'á-kón*, "black-eared," considered by the Kiowa to be the finest of all horses.

Dogúatal-édal afterward led a small war party, seven in number, including one woman, into Mexico. None of them ever returned, all the warriors having been killed, probably by Ute warriors, among whom the woman was found living by Big-bow and his companions when they visited that tribe in 1894. It was on this occasion that the Kiowa tribe gained the first intimation concerning the fate of the party. The woman was then the wife of a Ute and the mother of three of his children. Big-bow wanted her to return home with them, especially as her son by her Kiowa husband was still living, but her Ute husband was unwilling to come, and she refused to leave him and her three other children.

WINTER 1861-62

Tä'dalkop Sai, "Smallpox winter." The smallpox, like the measles, is indicated by a human figure covered with red spots (see 1839-40 and 1892). The Kiowa were camped for the winter about the Arkansas, in the vicinity of *Ádalka-i Doha*, in southwestern Kansas, and a party went into New Mexico to trade. They stopped at a town in the mountains at the head of the South Canadian, where smallpox was prevalent at the time, and the people warned them of the danger; they therefore left, but one Kiowa had already bought a blanket, which he refused to throw away, although requested to do so. On returning to their home camp, about New Year, he was attacked by the disease and died, and the epidemic spread through the tribe; many died, and the others scattered in various directions to escape the pestilence. The Cheyenne, Arapaho, Dakota, and other tribes also suffered greatly at the same time, as appears from the official report (*Report*, 86). It was in consequence of this epidemic that the Arikara abandoned their village lower down the Missouri and removed to their present location near Fort Berthold, North Dakota.



FIG. 130—Winter 1861-62—Smallpox.

It will be noticed that for several years the Kiowa appear to have been drifting eastward from their former haunts on the upper Arkansas. Although no definite reason is assigned for this movement, it may have been due to the influx of white men into Colorado, consequent upon the discovery of gold at Pike's peak in 1858, which would have a tendency to drive away the buffalo as well as to disquiet the Indians.

SUMMER 1862

Tä'dalkop Kyäkán K'ádó, "sun dance after the smallpox," or sometimes simply *Tä'dalkop K'ádó*, "smallpox sun dance." It was held a short distance west of where the sun dance had been held in 1858, on Mule creek, near the junction of Medicine-lodge creek with the Salt fork of the Arkansas. No event of importance marked this summer, which is indicated only by the medicine lodge.

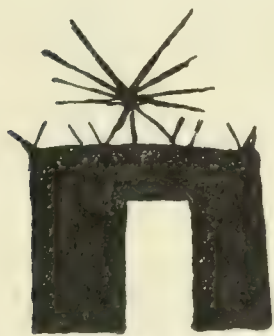


FIG. 131—Summer 1862—Sun dance after smallpox.

WINTER 1862-63

Ä'pätsü't Sai, "Treetop winter," or *Tséñko Sápän Étpata Sai*, "Winter when horses ate ashes." This winter the Kiowa camped on upper Walnut creek (*Tsodal-héñte-de P'a*, "No-arm's river"), which enters the Arkansas at the Great Bend, in Kansas. There was unusually deep snow upon the ground, so that the horses could not get at the grass, and in their hunger tried to eat the ashes thrown out from the camp fires.

In the early spring a large war party, accompanied by women, as was sometimes the custom among the Kiowa, started for Texas, along the trail which runs south through the Panhandle, crossing the North Canadian near Kiowa creek and passing on by Fort Elliott. While singing the "travel song" on a southern head stream of Wolf creek the tree tops returned the echo. The phenomenon was a mystery to the Indians, who ascribed it to spirits, but it may have been due to the fact that just south of the camp was a bluff, from which the sound may have been echoed back. The figure over the winter mark is intended to indicate the sound above the tree tops.

When a man wishes to gather a small war party he sends around to invite those who may desire to join him. On the night before he intends to start he sits alone in his tipi, having previously bent a long stick, like a hoop, around the fire hole; then he begins the *Gua-dagya* or travel song, beating time upon the hoop with another stick which he holds in his hand. When those who intend going with him hear the



FIG. 132—Winter
1862-63—Tree-
top winter.

song, they come in one by one and join in it, beating time in the same way with sticks. The women also come in and sit behind the men, joining in the song with them, but without beating time; after some time the leader invites them to come outside, to a buffalo hide, which the men surround and each holds it up with one hand while they beat time upon it with the sticks. The women and those who can not reach the hide stand behind and all sing together. The song is sung at intervals during the march. It has words with meaning and is different from all their other songs; the first singing by the leader is the signal that he intends to start the next day; the pipe was sent around only for a very large war party.

A contributor to the Montana Historical Society gives a humorous account of a rawhide dance by a party of packers on Columbia river, in 1858, when the tribes of that region had combined against the whites. The account is of interest as showing that the dance was found from the Columbia to the Rio Grande:

About dark some seven or eight canoes loaded with Yakima warriors landed near our camp. They were painted and rigged up in first-class war style and just spoiling for a fight. Our few Indian packers and the interpreter took the situation in and suggested that we bluff them. So we built a large camp fire out of sage brush and greasewood, and all of us, the Major included, formed a circle, and with one hand holding a rawhide, with a stick in the other, batted that rawhide and yelled and danced until we were nearly exhausted. This act, the interpreter said, was intended to show these Yakimas that we were not afraid of them and were ready to give them "the best we had in the shop," and to my utter surprise when I turned out in the morning not a canoe was to be seen. It was a complete bluff. They had taken the hint and gone away during the night. I must confess I felt pleased, and so would anyone, from the fact that there is less danger in thumping the rawhide as a bluff than trying to dodge their bullets (*Montana*, 2).

SUMMER 1863

Tsodalhénte-de P'a K'ádó, "No-arm's river sun dance." The figure near the medicine lodge shows a man with his right arm gone.

This dance was held on the south side of Arkansas river, in Kansas, at the Great Bend, a short distance below the mouth of upper Walnut creek, called *Tsodalhénte-de P'a*, "Armless man's creek," from a trader, William Allison, who kept a trading store at its mouth, on the east side, and who had lost his right arm from a bullet received in a fight with his stepfather, whom he killed in the encounter. From this circumstance the Kiowa knew him as *Tsodalhénte*, or sometimes *Man-héñk'ia*, "Armless man" or "No-arm." He had as partners his half brother, John Adkins, known to the Kiowa as *Kábodalte*, "Left-handed," and another man named Booth. Fort Zarah was built in the immediate vicinity of Allison's trading post in 1864.



FIG. 133—Summer 1863—
No-arm's-river sun
dance.

WINTER 1863-64

Ádaltoñ-édal Hém-de Sai, "Winter that Big-head died." The Set-t'an figure is sufficiently suggestive. *Ádaltoñ-edal* was the uncle of the present chief *Gomä'te* (Comalty), who has taken the same name. He died while the Kiowa were in their winter camp on the North Canadian, a short distance below the junction of Wolf creek at Fort Supply.



FIG. 134—Winter
1863-64 — Big-
head dies; Hân-
zephó'da dies.

The Anko calendar begins with this winter, the first event recorded being the death of *Hân-zephó'da*, "Kills-with-a-gun." He is represented below the winter mark, holding a gun to indicate his name, while the irregular black marking above his head is intended to show that he is "wiped out" or dead.

SUMMER 1864

Ä'sâhé K'ádó, "Ragweed sun dance," so called because held at a place where there was a large quantity of this plant growing, at the junction of Medicine-lodge creek and the Salt fork of the Arkansas, a short distance below where the dances had been held in 1858 and 1862. On the Set-t'an calendar the medicine lodge, instead of being painted black, as usual, is blue-green, to show the color of the plant (*ä'-sâhé*, literally "blue or green plant"), and is surmounted by a blue-green stalk of *ä'-sâhé* or ragweed.

In this summer the Anko calendar records a fight between the Kiowa tribe and soldiers, at which Anko himself was present. In the figure the ragweed is indicated by irregular markings at the base of the

medicine pole, while the fight is represented in the conventional way by means of bullets at the ends of wavy lines.

The encounter occurred at Fort Larned, Kansas, called by the Kiowa "The soldier place on Dark (i. e., shady)-timber (*ai-koñ*) river." The Kiowa had camped outside the post and were holding a scalp dance when Set-ängya and his cousin approached the entrance but were warned away by the sentry. Not understanding his words, they continued to advance, whereupon the soldier made a threatening motion with his gun, as if about to shoot. Upon this Set-ängya discharged two arrows at the soldier, shooting him through the body, while another Kiowa fired at him with a pistol. A panic immediately ensued, the Indians mounting their horses and the garrison hastily preparing to resist an attack. It so happened that the soldiers' horses were grazing outside the post and the Indians stampeded and ran them off, abandoning their camp, the soldiers being unable to follow on foot. The

Indians did not risk an attack on the post, but remained satisfied with the capture of the horses. No one was hurt excepting the sentry. Whether his wound proved fatal or not the Kiowa are unable to say. They state that this was their first hostile encounter with United States troops.

At the time of this occurrence there was a general Indian war in progress on the plains. The encounter is thus referred to by Agent Colley in a letter to the governor of Colorado, dated July 26, 1864:



FIG. 135.—Summer 1864 — Ragweed sun dance; soldier fight.

When I last wrote you I was in hopes that our Indian troubles were at an end. Colonel Chivington has just arrived from Larned and gives a sad account of affairs at that post. They have killed some ten men from a train and run off all the stock from the post.

As near as they can learn, all the tribes are engaged in it. The colonel will give you the particulars. There is no dependence to be put in any of them. I have done everything in my power to keep peace. I now think a little powder and lead is the best food for them.

In another place he states that "while the war chief of the Kiowa tribe was in the commanding officer's quarters at Fort Larned, professing the greatest friendship, the young men were running off nearly all the horses, mules, and cattle at the post" (*Report*, 87).

WINTER 1864-65

Tsenhó Sai, "Muddy-traveling winter," so called because the mud caused by the melting of heavy snows made traveling difficult. The Kiowa and Apache, with a part of the Comanche, made their winter camp on the South Canadian at *Guădal-dóhá*, "Red bluff," on the north side, between Adobe Walls and Mustang creek, in the Texas panhandle. While here early in the winter they were attacked by the famous scout Kit Carson, with a detachment of troops, assisted by a

number of the Ute and Jicarilla Apache. According to the Indian account, five persons of the allied tribes, including two women, were killed. The others, after a brave resistance, finally abandoned their camp, which was burned by the enemy. One of those killed was a young Apache warrior who wore a war-bonnet. He was shot from his horse and his war-bonnet was captured by a Ute warrior. An old Apache warrior, who was left behind in his tipi in the hurry of flight, was also killed.

In the Set-t'an calendar the attack upon the camp is indicated by conventional bullets and arrows around two tipis above the winter mark. In the Anko calendar it is indicated by a picture of the captured war-bonnet.

According to the Kiowa statement, most of the younger men were away on the warpath at the time, having left their families in the winter camp in charge of the old chief Dohásän. Early one morning some of the men had gone out to look for their ponies, when they discovered the enemy creeping up to surround them. They dashed back into camp and gave the alarm, and the women, who were preparing breakfast, hastily gathered up their children and ran, while the men mounted their horses to repel the assault. The Ute scouts advanced in Indian fashion, riding about and keeping up a constant yelling to stampede the Kiowa ponies, while the soldiers came on behind quietly and in regular order. Stumbling-bear was one of the leading warriors in the camp at the time and distinguished himself in the defense, killing one soldier and a Ute, and then killing or wounding another soldier so that he fell from his horse. Another warrior named Set-tádal, "Lean-bear," distinguished himself by his bravery in singing the war song of his order, the *Toñkóñko*, as he advanced to the charge, according to his military obligation, which forbade him to save himself until he had killed an enemy. Sét-k'opte, then a small boy, was there also, and describes vividly how he took his younger brother by the hand, while his mother carried the baby upon her back and another child in her arms, and all fled for a place of safety while Stumbling-bear and the warriors kept off the attacking party. The Kiowa escaped, excepting the five killed, but the camp was destroyed.

The engagement is thus mentioned in the testimony of an army officer a few months later:

I understand Kit Carson last winter destroyed an Indian village. He had about four hundred men with him, but the Indians attacked him as bravely as any men in the world, charging up to his lines, and he withdrew his command. They had a regular bugler, who sounded the calls as well as they are sounded for troops. Carson said if it had not been for his howitzers few would have been left to tell the tale. This I learned from an officer who was in the fight (*Condition, 1*).

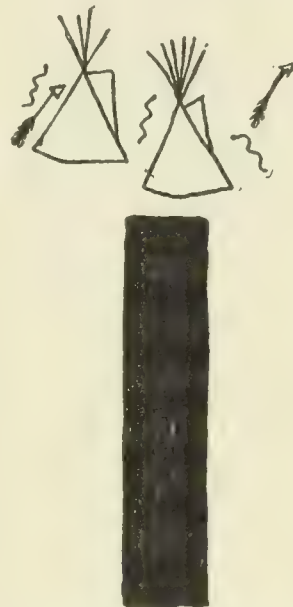


FIG. 136—Winter 1864-65—Ute fight.

The engagement is described in detail by Lieutenant George H. Pettis, who had charge of the two howitzers during the fight. The expedition, which consisted of three hundred and thirty-five volunteer soldiers and seventy-two Ute and Jicarilla Apache Indians, was under command of Colonel Christopher ("Kit") Carson, the noted scout and Indian fighter, then holding a commission in the First New Mexico infantry. Starting from Fort Bascom, New Mexico, they proceeded down the Canadian, the intention being to disable the Indians by taking them by surprise in their winter camp, as Custer did on the Washita four years later. The first village, a Kiowa camp consisting of one hundred and seventy-six tipis, was discovered on the Canadian at the entrance of a small stream since known as Kit Carson creek, in what is now Hutchinson county, Texas, a short distance above Adobe Walls. The attack was made at daybreak of November 25, 1864. After some resistance the Kiowa retreated a few miles down the river, where there were other camps of the allied Kiowa, Apache, and Comanche. Reenforced from these, they returned and made such a desperate attack upon the invaders that Carson was glad to retire after burning the upper village, although the other camps against which the expedition was directed were in plain sight below. The battle lasted all day, the Indians disputing every foot of his advance and following up his retreat so closely that only the howitzers saved the troops from utter destruction.

In the early part of the engagement the soldiers corralled their horses in an old abandoned adobe building which Pettis calls the Adobe Walls, but which was probably the ruins of the trading post built by Bent twenty years before (see winter 1843-44). The Adobe Walls, where Quanah led his celebrated fight, were not built until 1873 or 1874 and were some distance down the river. Several white captives, women and children, were in the hands of the Indians at the time of the attack, but none of these was rescued. The Kiowa also saved all their horses, although most of their winter provision and several hundred dressed buffalo skins in the first village, together with the tipis, were destroyed by the troops.

Quite a number of the enemy acted as skirmishers, being dismounted and hid in the tall grass in our front, and made it hot for most of us by their excellent marksmanship, while quite the larger part of them, mounted and covered with their war dresses, charged continually across our front, from right to left and *vice versa*, about 200 yards from our line of skirmishers, yelling like demons, and firing from under the necks of their horses at intervals. About 200 yards in rear of their line, all through the fighting at the Adobe Walls, was stationed one of the enemy, who had a cavalry bugle, and during the entire day he would blow the opposite call that was used by the officer in our line of skirmishers; for instance, when our bugles sounded the "advance," he would blow "retreat," and when ours sounded the "retreat," he would follow with the "advance;" ours would signal "halt," he would follow suit. So he kept it up all the day, blowing as shrill and clearly as our very best buglers. Carson insisted that it was a white man, but I have never received any information to corroborate this opinion (*Pettis*).

It was most probably a Kiowa, possibly Set-t'aiñte himself, who was famous for a bugle, which instrument he blew as a signal on state occasions.

Deeming it unsafe to remain longer after destroying the first village, Carson formed the troops in marching order, with skirmishers in front and on the flanks and the howitzers bringing up the rear, and began the return march.

The enemy was not disposed to allow us to return without molestation, and in a very few minutes was attacking us on every side. By setting fire to the high, dry grass of the river bottom, they drove us to the foothills, and by riding in rear of the fire, as it came burning toward us, they would occasionally get within a few yards of the column; being enveloped in the smoke, they would deliver the fire of their rifles and get out of harm's way before they could be discovered by us.

On the side of the troops, Pettis reports two soldiers killed and twenty-one wounded, several mortally, together with one Ute killed and four wounded. He puts the Indian loss at nearly one hundred killed and between one hundred and one hundred and fifty wounded. The official report, which he quotes, makes the number of tipis in the village destroyed about one hundred and fifty and the Indian loss in killed and wounded together only sixty. Among these were four crippled or decrepit old Indians, who were killed in the tipis by a couple of Ute squaws searching for plunder. A buggy and spring wagon belonging to Sierrito or "Little-mountain" (Dohásän) are also mentioned as having been destroyed.

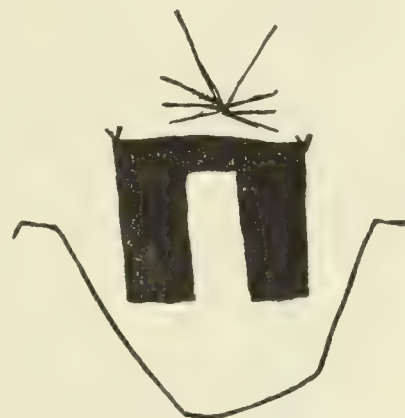


FIG. 137 — Summer 1865 —
Peninsula sun dance.

A signal instance of Indian bravery is noted by Pettis:

At one of the discharges the shell passed directly through the body of a horse on which was a Comanche riding at a full run, and went some 200 or 300 yards farther on before it exploded. The horse, on being struck, went head foremost to earth, throwing his rider, as it seemed, 20 feet into the air, with his hands and feet sprawling in all directions, and as he struck the earth, apparently senseless, two other Indians who were near by proceeded to him, one on each side, and throwing themselves over on the sides of their horses, seized each an arm and dragged him from the field between them, amid a shower of rifle balls from our skirmishers. This act of the Indians in removing their dead and helpless wounded from the field is always done, and more than a score of times were we eyewitnesses to this feat during the afternoon (*Pettis*).

SUMMER 1865

Pihó K'ádó, "Peninsula sun dance." It is so called because held in the peninsula or bend of the Washita on the south side, a short distance below the mouth of Walnut creek (*Zódältoñ P'a*, "Vomiting-water river") within the present reservation. The Set-t'an calendar represents the medicine lodge in the bend, indicated by a curved line. In the Anko calendar the peninsula is more rudely indicated by a circle around the base of the medicine pole.

WINTER 1865-66

In this winter the Set-t'an calendar records the death of the noted war chief, Tä'n-kónkya, "Black-warbonnet-top," on a southern tributary of the upper South Canadian. The war-bonnet is made conspicuous in the figure to call attention to his name.

The Anko calendar notes the death of the celebrated chief Dohásän, "Little-bluff," the greatest and most noted chief in the history of the tribe, who died on the Cimarron in this winter. The event is indicated by the figure of a wagon, he being the only Kiowa who owned a wagon at that time. For more than thirty years from the massacre by the Osage in 1833, he had been the recognized head chief of the Kiowa. His death left no one of sufficiently commanding influence to unite the tribe under one leadership, and thenceforth the councils of the Kiowa were divided under such rival chieftains as Set-t'aiñte and Kicking-bird until the unsuccessful outbreak of 1874 finally reduced them to the position of a reservation tribe and practically put an end to the power of the chiefs.



FIG. 138—Winter 1865-66—Tän-kónkya died; Dohásän died.

This winter is notable also for the arrival of a large trading party from Kansas under the leadership of a man named John Smith. He traded also among the Cheyenne, whose language he spoke, and was called by them *Póomûts*, "Gray-blanket," or "Saddle-blanket," these articles forming a part of his trading stock; this name the Kiowa corrupted into *Pohóme*. The party visited all the various camps of the Cheyenne and Kiowa, trading blankets and other goods for buffalo hides. Smith died among the Cheyenne after having lived more than forty years in the Indian country, and was buried in the sand hills near the present agency at Darlington, Oklahoma. His name appears in the official reports as government interpreter for the Cheyenne, and he rendered valuable assistance at the Medicine Lodge treaty in 1867.

SUMMER 1866

Hân-kopédal K'ádó, "Flat metal (i. e. German silver) sun dance," was held on Medicine-lodge creek, near its mouth, in Oklahoma. It was so called because a trader brought them at this time a large quantity of German silver, from which they made headdresses, belts for women, bracelets, and other ornaments. German silver is known to the Kiowa as "flat metal," because it is furnished to them in sheets, which they cut and hammer into the desired shapes. On both calendars the event is recorded in the same way, by the figure of a head pendent with silver disks placed near the medicine lodge. Such pendants were attached to the head of the scalplock, and consisted of a strip of buffalo hide reaching nearly to the ground and covered along the whole

length with a row of silver, copper, or German-silver disks, gradually decreasing in size toward the bottom, which was usually finished off with a tuft of bright-colored horsehair. They were called *góm-â'dal-hâ'ñgya*, "back-hair-metal," and were highly prized by the warriors. This was not the first time the Kiowa had obtained German silver. In the old days these ornaments were made for them, of genuine silver, by Mexican silversmiths near the present Silver City, New Mexico.

Charles W. Whitacre (or Whittaker), the trader who brought their supply of metal on this occasion, together with sugar and other goods, had some knowledge of the Kiowa language, as well as of Comanche and Caddo, and is familiarly known to the older Kiowa as *Tsáli*, i. e., Charley. He was present at the Medicine Lodge treaty the next year, and afterward kept a trading store on the north side of the Washita, near the place where the Wichita school is now located, a short distance from the agency at Anadarko. He was killed by accidentally shooting himself about 1882.

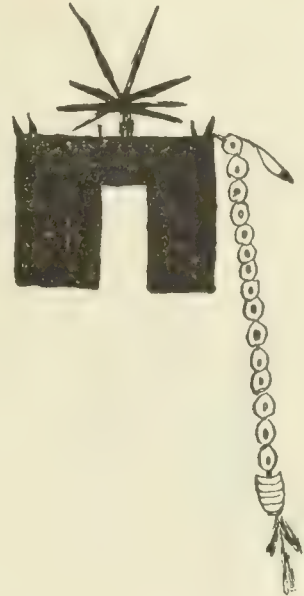


FIG. 139—Summer 1866—German-silver sun dance.

WINTER 1866-67

Ä'pämâ'dal Ehótal-de Sai, "Winter that *Ä'pämâ'dalte* was killed." The name signifies "Struck-his-head-against-a-tree." The same event is recorded on both calendars, the figures being sufficiently suggestive. He was a Mexican captive among the Kiowa, and was killed, in an encounter with troops or Texans, while with a party led by the present Big-bow, at a small creek on the main emigrant road to California (*Hóan T'a'ká-i*, "White-man's road") in southwestern Texas. When killed he was trying to stampede the horses which the Texans had left a short distance away. There is no official notice of this encounter in the reports, beyond general references to continual Kiowa raids into Texas.



FIG. 140 — Winter 1866-67—*Ä'päm-â'dalte* killed.

In this winter, also, Andres Martinez, the most influential captive among the Kiowa, was bought by them from the Mescalero Apache, who had captured him a few months previously near Las Vegas, New Mexico. He was then seven years of age, and was adopted by the Kiowa, and at once taken by them on a raid into Mexico. His purchaser was *Set-dayá-ite*, "Many-bears," who was killed by the Ute in 1868.

SUMMER 1867

T'a-kón Ä'semtse-de K'ádó, "Sun dance when Black-ear was stolen. This dance was held on the north bank of the Washita, near the western

line of Oklahoma. The Cheyenne also attended. While the dance was in progress a party of Navaho stole a herd of Kiowa ponies, including a fine white racer with black ears, the kind most highly prized by the Indians. The Kiowa had no idea that the horses had been stolen by lurking enemies, but supposed that they had simply strayed, until after the dance was over, when the three tribes organized an expedition against the Navaho, at that time upon a reservation in eastern New Mexico, and there captured a number of horses, including the stolen herd. The event is recorded on the Set-t'an calendar by means of the figure of a white horse with black ears above the medicine lodge.

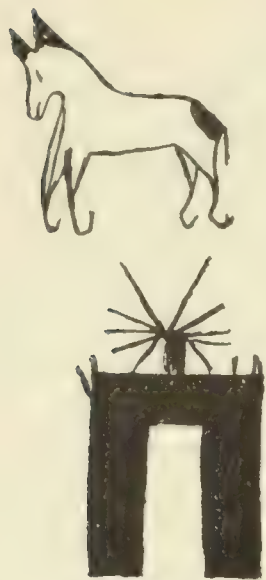


FIG. 141—Summer 1867—Black-ear stolen; the *Kâitseñko*.

This dance is also designated as *Kâitseñko Edópäñ-de K'ádó*, "Sun dance when the *Kâitseñko* were initiated" (and further distinguished from similar occasions by describing it as "*Ä'guntä P'a-gya*, "on Washita river"), from the fact that on this occasion the members of this order made new sashes for themselves. Some who had acted in a cowardly manner were degraded at the same time, their sashes stripped from them and given to others more worthy (see summer 1846). The event is indicated on the Anko calendar by means of a figure above the medicine lodge representing a man with the *Kâitseñko* headdress and sash.

WINTER 1867-68

Ä'yä'daldä Sai, "Timber-hill winter," so-called on account of the famous treaty made this winter with the confederated tribes on Medicine-lodge creek, Kansas, known to the Kiowa as "*Ä'yä'daldä P'a*, Timber-hill river." The picture on the Set-t'an calendar is highly suggestive. It represents a white man, who appears to be a soldier, grasping the hand of an Indian, the locality being shown by the figure of a tree-covered hill above the winter-mark.

The Anko calendar has no reference to this treaty, which is the leading event in Kiowa history of the last thirty years, but records instead a minor occurrence, the killing by the Kiowa of a Navaho, indicated below the winter mark by the figure of a man with his hair bunched in Navaho fashion, wearing the characteristic black leggings and moccasins and carrying a quiver. He was killed near *Gúädal Dóhá*, on the upper South Canadian, by a party under White-horse, of which Anko was a member. On examining the body of the dead man they found that he had no ears, having probably been so born. For this reason the winter



FIG. 142—Winter 1867-68—Medicine Lodge treaty; Navaho killed.

is sometimes known as *T'á-bódal Ehótal-de Sai*, "Winter that Spoiled-ear was killed." Several parties went against the Navaho on the Pecos this year (that tribe being still at the Bosque Redondo), particularly a large expedition, including nearly all the Comanche and about half of the Kiowa and Apache, which started immediately after the sun dance, defeated the Navaho in an important engagement, and returned in time for the treaty.

The treaty of Medicine Lodge has already been discussed at length in another place. According to the statement of the Kiowa they were camped on the creek where they had held their sun dance, when they were summoned to Fort Larned. Set-t'aiñte, Set-ängya, Set-ïmkía, and the other chiefs, with all their people, at once moved to that point, where they met an officer who, they say, was called *Gánúün*, "General" by the whites, and whom the Indians called *Pasót-kyä'tó*, "Old-man-of-the-thunder," because he wore upon his shoulders the eagle or thunderbird. This was General Winfield S. Hancock, then in command in that section. By his direction they camped on the river near the post, where they were supplied with rations for some days until the purpose of the government was explained to them. They then returned to Medicine-lodge creek and prepared a council house among the trees, ready for the arrival of the commissioners. The medicine lodge and Kiowa camp were on the south (west) side of the creek, while the council house in which the treaty was made was on the opposite (northeast) side, 12 miles above, or about 3 miles above the junction of Elm creek and near the present site of Medicine Lodge, Barber county, Kansas. It is described in the treaty itself as "the council camp on Medicine Lodge creek, 70 miles south of Fort Larned, in the State of Kansas." The low, timbered hill, from which the stream takes its Kiowa name of *Ä'yü'daldü P'a*, "Timber-hill river," is on the east side, opposite the medicine lodge of the last preceding dance, from which the stream derives its present name. It was a favorite dance headquarters, as several other dances had already been held in the same vicinity.

The Kiowa say that the white man, Philip McCusker, who interpreted the treaty to the three confederated tribes, spoke only Comanche, and his words were translated into Kiowa by Bä'o ("Cat"), alias Guñsádalte, "Having-horns," who is still living. They sum up the provisions of the treaty by saying that the commissioners promised to give them "a place to go," to give them schools, and to feed them for thirty years, and hoped that they would then know how to take care of themselves. Only a part of the Comanche were represented, most of the Kwáhadí band being then on an expedition against the Navaho. According to contemporary notices, there were present at the treaty over eight hundred and fifty tipis, or about five thousand souls, of the Cheyenne, Arapaho, Kiowa, Comanche, and Apache, together with about six hundred whites, including the commissioners and attachés, a large

detachment of the Seventh infantry, and miscellaneous camp followers, the various groups and bands being scattered for a distance of several miles along the stream, forming probably the largest Indian gathering that had ever been held on the plains.

SUMMER 1868

Íätä'go Dahótal-de K'ádó, "Sun dance when the Ute killed us," or *Ä'yädaldä P'a K'ádó*, "Timber-hill river (Medicine-lodge creek) sun dance." The dance this summer was held on Medicine-lodge creek, near where the treaty had been made, this, as has been said, being a favorite place for the purpose. The Cheyenne and Arapaho also frequently held their sun dance in the same neighborhood, but not in connection with the Kiowa, although they always attended the Kiowa dance in large numbers. The Comanche had no sun dance of their own,

but sometimes joined with the Kiowa. On one occasion they tried to get up such a dance, but the attempt was a failure.



FIG. 143—Summer 1868—Ute fight.

This summer was signalized by a disastrous encounter with the Ute, in which two of the three *taímes* of the Kiowa were captured. On the Set-t'an calendar this battle is indicated by the figure, above the medicine lodge, of a man holding out the red stone war-pipe, which was sent around as an invitation to the warriors to join the expedition. On the Anko calendar it is indicated by flying bullets about the medicine lodge.

This battle was the most disastrous in the history of the Kiowa tribe since the memorable massacre by the Osage in 1833. The impression made was perhaps even greater, for the reason that their sacred palladium captured on this occasion has never since been recovered.

In the previous winter *Pá-tadal*, "Lean-bull" (alias Poor-buffalo), who is still living, had led a small party against the Navaho beyond the head of the South Canadian. On reaching the salt beds on that river, near the line between Texas and New Mexico, they met some Navaho coming on foot to steal Kiowa horses. A fight ensued, resulting in the death of one Navaho and one Kiowa, the latter being *Pá-tadal's* stepson. The father thirsted for revenge, and at the next sun dance he sent around the pipe to all the warriors of the tribe to enlist them for a great expedition against the Navaho. A large number responded, perhaps two hundred, including some of the Comanche, and placed themselves under his leadership. Among these was *Set-dayá-ite*, "Many-bears," the son (nephew?) of *Ansó'te*, the medicine keeper. To render victory more certain and complete, he asked and obtained permission from his father to carry with the expedition the two smaller *taíme* images, viz, the small "man" figure and the "bear kidney." These were sometimes carried to the field, but the larger one, the "woman,"

which the tribe still retains, was never allowed to leave the home camp. Set-dayá-ite carried one and intrusted the other to his friend Pá-guñhéñte, "Hornless-bull." According to another story, Pá-guñhéñte's medicine was one which belonged to himself and had no connection with the *taíme*, although it was a smaller image of similar appearance. However, Pá-guñhéñte was killed and his medicine captured, together with the other.

They set out for the Navaho country, but the omens were unpropitious from the start. Among the numerous things tabooed to the *taíme* are bears, skunks, rabbits, and looking-glasses, none of which must be permitted to come near the sacred image or be touched by the *taíme* keeper. Almost at the start the warriors were alarmed by seeing a skunk cross their path, and soon afterward it was discovered that the Comanche had brought with them their looking-glasses, which they refused to break or throw away, but wrapped them up and concealed them at one of the camping places to await their return. Farther on, at a place where the warriors had halted for the night to prepare supper, the wind carried to the nostrils of the Kiowa the smell of burning grease. On investigating the cause they found that their sacrilegious allies had killed a bear and were broiling the flesh over their fire. Realizing that nothing but defeat could now be in store for them, many of the warriors turned back, but Set-dayá-ite, trusting to his medicine, persisted in going forward, while Pá-tadal, although he foresaw disaster, as the organizer and leader of the expedition felt bound in honor to proceed.

They went up the north bank of the South Canadian until they reached the salt beds in the vicinity of Red-river spring, near where they had encountered the Navaho the preceding winter. Here they met a much smaller party of Ute, said to have numbered only thirty or forty, and the battle at once began. For some reason, perhaps because the Kiowa felt that their gods had deserted them, they did not fight with their accustomed dash, and the battle soon became a flight, the Ute pursuing them for some miles down the river and killing seven, including Set-dayá-ite and his adopted son, a Mexican captive. Set-dayá-ite on this occasion rode a balky horse, which became unmanageable, so that he dismounted and met his fate on foot, telling his comrades that there was his place to die. His adopted son might have saved himself, but on seeing his father's plight he returned and was killed with him. Pá-guñhéñte, who carried the other medicine, was also among the slain.

Set-dayá-ite had the *taíme* bag tied upon his back, where it was found by the Ute after the fight. They readily recognized it as some great "medicine," a conjecture which was made certain if it be true, as some say, that the dead man had cut (painted?) upon his body sacred emblems similar to those painted upon the image itself, viz, a crescent upon each breast, the sun in the center, and upon his forehead another

crescent. Stumbling-bear, who was in the fight, as was also Anko, went back shortly afterward to bury his remains. He found a beaten circle around the skeleton of Set-dayá-ite, as though the Ute had danced around his dead body.

The Ute carried the *taíme* with them to their own country, but misfortune went with it. The son of its capturer was shortly afterward killed in a fight with the Cheyenne, and soon after that the custodian himself was killed by a stroke of lightning. Afraid to keep longer such "bad medicine," they brought both images down to the trader Maxwell, in New Mexico, who placed them on a shelf in his store, where they remained in plain view for a long time, but were finally lost. The Ute left word with Maxwell that the Kiowa, if they came for the images, might have them, on payment of a specified number of ponies. For some reason the Kiowa did not come—perhaps because they were afraid to trust themselves so far in their enemies' country.

While the sacred images were on Maxwell's shelf they were seen by a brother of George Bent, of the noted pioneer trading family, from whom the author obtained a description of their appearance. They were two small carved stones or petrifications, the *taíme* proper having the shape of a man's head and bust, and was decorated and painted. The other resembled in form a bear's kidney. While in New Mexico some years ago the author made diligent inquiry among Maxwell's former business associates concerning the images, but found no one who could throw any light upon their whereabouts. In 1893 Big-bow and some others of the tribe visited the Ute, chiefly for the purpose of ascertaining the fate of the *taíme*, not knowing that it had passed out of their possession. They learned nothing, however, as they asked no direct questions concerning it and the Ute volunteered no information. This was the first friendly meeting between the two tribes, although as early as 1873 the Kiowa chiefs in council had made an urgent request to the agent that some good white man should be sent with them to make peace with the Ute (*Battey*, 18).

When the news of the defeat reached them, the Kiowa were encamped on the Arkansas, near Fort Larned, where at that time they drew their government issues. They at once moved down to the Washita and encamped adjoining the Cheyenne village under Black-kettle, on the western border of Oklahoma. This village was soon after destroyed by Custer. About this time steps were taken to confine the confederated tribes to the reservation assigned them by the late treaty, which was soon after accomplished, and as a people the Kiowa never again went back to the neighborhood of Arkansas river.

The only official reference to this fight, if indeed it does refer to it, is the incidental mention in a letter of about June 20 that an appointment by the agent for the Ute and Jicarilla Apache had been postponed in consequence of the absence of Kaneatche, who was away and had had a fight with the Kiowa and Comanche (*Report*, 88). Kaneatche,

Kanache, or Conyatz (*Kanats* according to Major Powell) was the head chief of the confederate Ute and Jicarilla band of Apache, and on his death was succeeded by Ouray.

The encounter is thus noted by a contemporary author:

During the previous summer [1868] a war party of Ute left their haunts in New Mexico, and after marching on foot a distance of over 500 miles fell upon a band of Kiowa, completely routed them, captured a number of ponies, took many scalps, and, more calamitous than all, got possession of the "medicine" of the band. As might be inferred, the Kiowa had a superstitious dread of the very name Ute (*Keim, 2*).

The action and the grief of the Kiowa over the loss of their medicine are further described by a writer in a contemporary Kansas newspaper, who evidently speaks with exact knowledge:

About the 10th of July [1868] the Kiowa had a battle with the Ute, in which the chief Heap-of-Bears and seven other Kiowa braves were killed. Heap-of-Bears had on his person the medicine of the Kiowa, which was captured by the Ute, who still retain it. This medicine consists of an image about 18 inches in length, carved to represent a human face, and covered with the down and feathers of the eagle and other birds and swathed in wrappers of different materials of value. Although I have been conversant with Indian habits and customs for a long time, I was surprised to find the value these people attach to this medicine. They begged and implored Colonel Murphy to recover it for them, and promised to pay the Ute as many horses as they wanted, and also to make a permanent and lasting peace, not only with the Ute, but also to refrain from further depredations on the Texas border, if this should be restored. Colonel Murphy promised to endeavor to recover it, but I think his success in the matter will be doubtful, as the Ute also attach great importance to their capture, believing that while they retain it the Kiowa will be powerless to do them harm (*Abbott, 1*).



WINTER 1868-69

Tän-gúädal Ehótal-de Sai, "Winter that Tän-gúädal was killed." *Tän* is the name of a particular variety of head-dress, also of an edible root resembling a turnip; *gúädal* signifies red. Shortly after the removal to the Washita, a small raiding party went to Texas. In an encounter with a white man and boy both parties fired simultaneously and Tän-gúädal was killed. Although a young man, he was a noted warrior and the hereditary owner of a medicine lance or *zebat*, shaped and adorned like an arrow. The event is indicated on the Set-t'an calendar by the figure, above the winter mark, of a man holding the arrow lance. On the Anko calendar it is indicated by the rude figure of the medicine lance.

This medicine lance, which was hereditary in Tän-gúädal's family, came originally from the Crows. The one carried by him on this occasion, as described by Set-k'opte, who was with the party, had a Mexican-made steel blade and was left sticking upright in the ground at the place where they rested before the encounter, the owner not having taken it into the fight. Set-t'aiñte claimed the hereditary right to this

FIG. 144—Winter 1868-69 — Tän-gúädal killed.

medicine lance, through marriage into the family of one of Tān-gúādal's ancestors. Despite the protest of Tān-gúādal, he made a similar lance, which he carried for several years (see summer 1874). This lance of Set-t'aiñte is said to have had a separable ornamented wooden point, which was inserted on ceremonial occasions, while an ordinary steel blade was substituted when it was to be used in actual service. Similar "medicine" lances for ceremonial purposes were used also among other tribes.

While this expedition was in Texas another party, under Stumbling-bear, went up the Canadian to bury the bones of those killed with Set-dayá-ite in the encounter with the Ute.

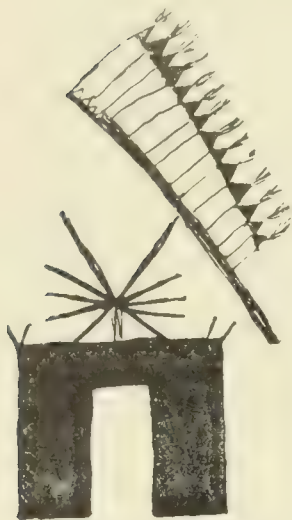


FIG. 145—Summer 1869—War-bonnet sun dance.

SUMMER 1869

Ä'tahá-i Gyü'gan-de K'ádó, "Sun dance when they brought the war-bonnet." On both calendars this sun dance is designated by the figure of a war-bonnet (*ä-tahá-i*, "feather crest") above the medicine lodge.

The dance was held on the north side of the North fork of Red River, a short distance below the junction of Sweetwater creek, near the western line of Oklahoma, the Kiowa having been removed during the preceding autumn from Kansas and the north to their present reservation, but still ranging outside the boundaries, under the hunting privilege accorded by the late treaty. While the dance was in progress, Big-bow, who had gone with a large party against the Ute to avenge the death of Set-dayá-ite the year before, returned with the war-bonnet of a Ute whom he had killed in the mountains at the head of the Arkansas, in Colorado. By a curious chance this Ute was one whom the Cheyenne or Arapaho had wounded and scalped on a former expedition. The Ute had taken their wounded comrade to the Mexicans of New Mexico, who cured him, only to die soon afterward by the hand of a Kiowa. The facts in the case were learned by Big-bow on his friendly visit to the Ute in 1893.

WINTER 1869-70

Dómbá Etpé-de Sai, "Winter when they were frightened by the bugle." The circumstance is indicated on both calendars by means of a bugle in connection with the winter mark.

This was a winter of chronic alarm, as the Cheyenne, the neighbors and friends of the Kiowa, were on the warpath and were being hard pressed by Custer. The Kiowa had made their winter settlement in two camps on Beaver creek, near the junction of Wolf creek, in the vicinity of the present Fort Supply, in Oklahoma. It was reported that soldiers were in the neighborhood, and a party of young men went

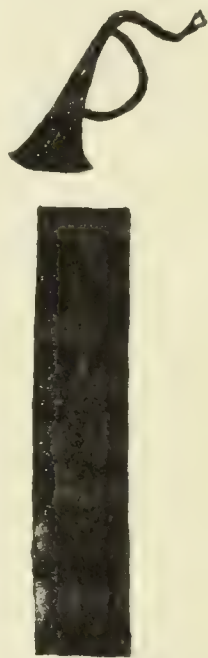


FIG. 146—Winter 1869-70—Bugle scare.

out to look for them. On returning, about daylight, one of them, who carried a bugle, blew it to announce their approach, with the result that the whole camp, thinking that the troops were about to attack them, fled precipitately several miles before the truth was discovered.

According to another account, the bugle was blown by Set-t'aiñte, who for many years carried on ceremonial occasions a bugle which he had probably obtained from some army post. He had been on a visit to the Arkansas, and blew it on his return in order to locate the camp.

SUMMER 1870

É'gú Gyäk'üädä-de K'ádó, "Plant-growing sun dance," or *K'ádó Paññoñhü'-de*, "Dusty sun dance." The former is the more common designation. This sun dance, like the last, was held on the North fork of Red river, but on the south side, in what is now Greer county, Oklahoma, near where the reservation line strikes the stream. During the dance the traders brought corn and watermelons to sell to the Indians. The seeds were thrown away, and on returning to the spot in the fall the Kiowa found that they had germinated in the sandy soil and developed into full growth; hence the common name of the dance, indicated on the Set-t'an calendar by a stalk of green (blue) corn beside the medicine lodge. On the Anko calendar it is distinguished as the "Dusty sun dance," on account of the high winds which raised clouds of dust during the dance and which are rudely indicated by close black lines across the medicine pole. No other event is recorded, the dance serving merely as a chronologic point.



FIG. 147 — Summer 1870 — Plant-growing sun dance; dusty sun dance.



FIG. 148— Winter 1870 - 71 — Set-ängya's bones brought home; drunken fight; negroes killed.

WINTER 1870-71

Set-ä'ngya Ä'ton Ágan-de Sai, "Winter when they brought Set-ängya's bones."

For this winter the Set-t'an calendar records the bringing home of the bones of young Set-ängya, indicated by a skeleton above the winter mark, with a sitting bear over the head.

In the spring of 1870, before the last sun dance, the son of the noted chief Set-ängya ("Sitting-bear"), the young man having the same name as his father, had made a raid with a few followers into Texas, where, while making an attack upon a house, he had been shot and killed. After the dance his father with some friends went to Texas, found his bones and wrapped them in several fine blankets, put the bundle upon the back of a led horse and brought them home. On the return journey he killed and scalped a white man, which revenge served in some measure to assuage his grief. On reaching home he

erected a tipi with a raised platform inside, upon which, as upon a bed, he placed the bundle containing his son's bones. He then made a feast within the funeral tipi, to which he invited all his friends in the name of his son, telling them, "My son calls you to eat." From that time he always spoke of his son as sleeping, not as dead, and frequently put food and water near the platform for his refreshment on awaking. While on a march the remains were always put upon the saddle of a led horse, as when first brought home, the tipi and the horse thus burdened being a matter of personal knowledge to all the middle-age people of the tribe now living. He continued to care for his son's bones in this manner until he himself was killed at Fort Sill about a year later, when the Kiowa buried them. Although a young man, Set-ängya's son held the office of *Toñhyópďǎ'*, the pipe-bearer or leader who went in front of the young warriors on a war expedition.

The Anko calendar records two incidents. The first was a drunken fight between two Kiowa, in which one killed the other, indicated by the rude representation of two heads with a bottle between them. The other event was the killing of four or five negroes in Texas by a party led by Mamä'nte ("Walking-above"), who brought back the scalps with the woolly hair attached. It is shown on the calendar by means of a figure with bullet and arrow wounds, drawn below the heads and the bottle. An attempt has been made to indicate the peculiar woolly hair of the negro; the trousers are blue, like those worn by soldiers, Anko thinking they were probably soldiers, because, as he says, "Negroes can't go alone."

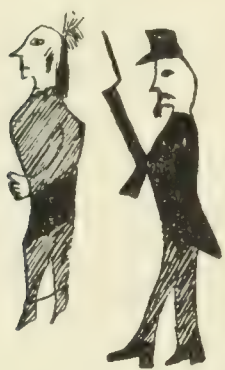


FIG. 149—Summer 1871—Set-t'aiñte arrested; Koñ-päte killed.

In this winter Ansó-giāni or Ansó'te, "Long-foot," the great medicine keeper, died of extreme old age. He had been in charge of the *taíme* for forty years; consequently there was no sun dance for two years until his successor was selected.

SUMMER 1871

For this summer the Anko calendar records the death of Koñpä'te, "Blackens-himself," who was shot through the head in a skirmish with soldiers. He was the brother of the noted raider, White-horse. The event is indicated by the rude representation of a head struck by a bullet. As there was no dance this summer, the medicine lodge is not represented on either calendar.

The great event of the summer was the arrest of the noted chiefs and raiders, Set-t'aiñte, Set-ängya and Ä'do-eétte, "Big-tree." The figure on the Set-t'an calendar shows the soldier arresting Set-t'aiñte, distinguished by the red war-paint which he always used.

Notwithstanding the promises of good conduct which had induced General Sheridan to release Lone-wolf and Set-t'aiñte when the tribe had been brought to the reservation in December, 1868, the Kiowa

had never ceased their raids into Texas, and had constantly behaved in the most insolent manner toward the agent and military commander on the reservation. On May 17, 1871, a party of about one hundred warriors, led by Set-t'aiñte and Set-ängya, attacked a wagon train in Texas, killed 7 men and captured 41 mules. Shortly afterward Set-t'aiñte had the boldness to avow the deed to the agent, Lawrie Tatum, who at once called upon the commander at Fort Sill to arrest Set-t'aiñte and several other chiefs who had accompanied him, viz: Set-ängya, Big-tree, Big-bow, Eagle-Heart and Fast-bear. The officer promptly responded and arrested the first three; Eagle-heart escaped and the other two were absent at the time. On May 28, the three prisoners were sent under military guard to Fort Richardson (Jacksboro), Texas, to be tried for their crimes, when Set-ängya attacked the guard and was killed in the wagon (*Report, 89; Record, 11; Battey, 19; Tatum letter*). The fate of the other prisoners is noted elsewhere.

According to the Kiowa account, which is correct in the main incidents, the prisoners having been disarmed, Set-ängya was placed in a wagon, accompanied by a single soldier, and Set-t'aiñte and Big-tree were put into another wagon with other guards, and an escort of cavalry and Tonkawa scouts rode on either side. Leaving Fort Sill, they started toward the south on the road to Texas, when Set-ängya began a loud harangue to the two prisoners in the other wagon, telling them that he was a chief and a warrior, too old to be treated like a little child. Then pointing to a tree where the road descends to cross a small stream about a mile south of the post, he said: "I shall never go beyond that tree." As he spoke in the Kiowa language, none but the prisoners knew what he was saying. Then raising his voice, he sang his death song, the song of the Kâitséñko, of whom he was chief:

I'ha hyo' o'ya i'ya' i'ya' o i'ha ya'ya yo'yo'
 A'he'ya ahe'ya' ya'he'yo' ya e'ya he'yo e'he'yo
 Kâ'itseñ'ko äñä'obahe'ma haa'-ipai'-degi o'ba'-ikă'
 Kâi'tse'ñko äñä'obahe'ma hadâ'mga'gi o'ba'-ikă'

I hahyo, etc.

Aheya, etc.

O sun, you remain forever, but we Kâitse'ñko must die.

O earth, you remain forever, but we Kâitse'ñko must die.

The song ended, he suddenly sprang upon the guard with a knife which he had managed to conceal about his person, and had cut him seriously when the soldiers following behind fired and he fell dead in the wagon. He was buried in the military cemetery at Fort Sill, but there is nothing to distinguish the grave. The Kiowa statement of his singing his death song is corroborated by Battey and by agent Tatum.

Although a noted warrior and a chief of the Kâitséñko, Set-ängya was generally feared and disliked by the tribe on account of his vindictive disposition and his supposed powers of magic. It was believed that he could kill an enemy by occult means, and that he had in this manner actually disposed of one or two who had incurred his displeasure. The

knife with which he attacked the soldier is reputed to have been a "medicine knife," which he could swallow and disgorge as demanded by the necessity of concealment or use; several stories are told by the Indians to confirm this belief. His paternal grandmother was a woman of the Sarsi (*Pákiügo*, a small tribe incorporated with the Blackfeet,)

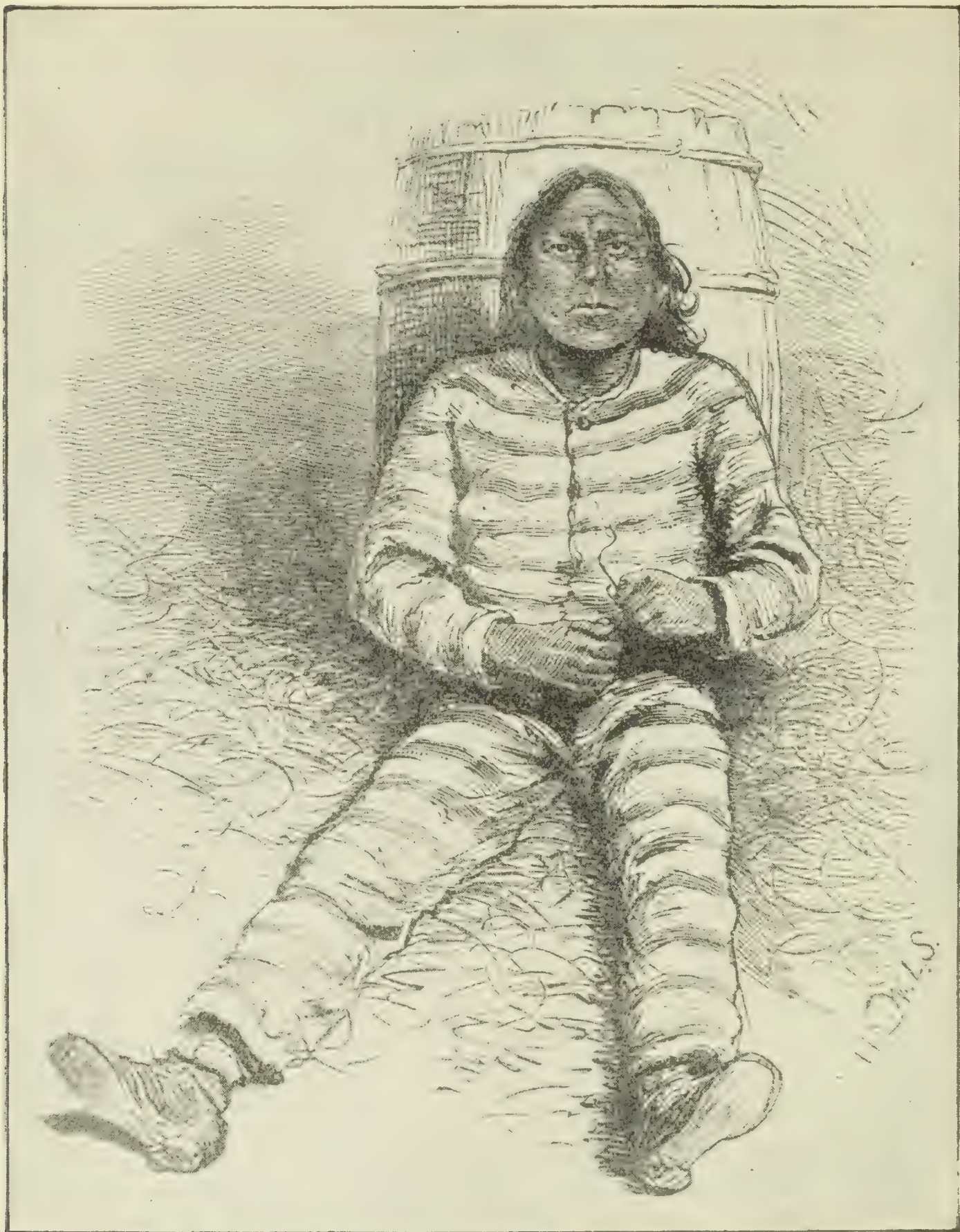


FIG. 150—Set-t'ainte in prison (from *Scribner's Monthly*, February, 1874)

who had married a Kiowa when the latter tribe lived in the far north. Unlike Indians generally, he habitually wore a mustache and straggling beard. He left two children; the elder, a son, was adopted into a white family under the name of Joshua Given, was educated in the east, married a white lady, afterward returned as a missionary to his people,



and died of consumption about four years ago. The younger child, Julia Given, was until recently employed in one of the mission schools on the reservation.

Bearing on the subject of the arrest of the three chiefs and the death of Set-ängya, we quote at length from a letter written by Lawrie Tatum, the first agent for the Kiowa and associated tribes, from whom the author has obtained much valuable information in response to letters of inquiry. Mr Tatum, who is now (1896) living in Springdale, Iowa, at the advanced age of 75 years, is a member of the Society of Friends, and was appointed, on their recommendation, in accordance with the "Indian peace policy" of President Grant, soon after the tribes were brought upon the reservation. He took charge, as he states, July 1, 1869, and resigned March 31, 1873, in consequence of the release of Set-t'aiñte and Big-tree, a measure which he opposed, as it was on his motion that these men were originally arrested. During his incumbency he rescued a number of white captives without ransom—a thing before unexampled. On this point he states, in a letter of March 31, 1896:

I recovered fourteen white captives from the Indians, two of whom had forgotten their names and every word of English. I advertised for their parents and found them. I also recovered twelve Mexicans. I was the first agent, I think, that those Indians had, who obtained captives of them without paying a ransom. A part of them were procured by withholding rations from the band that had them, and a part were obtained by means of the leverage that Colonel Mackenzie gave by taking a hundred women and children from a raiding camp to Texas.

His stringent measures at times brought him into disfavor with his co-religionists, but had great influence in bringing these unruly tribes under effectual control. He writes, under date of April 7, 1896:

General Sherman called at my office, Kiowa and Comanche agency, Indian Territory, fifth month, 23, 1871, to see if I knew of any Indians having gone to Texas lately. He said that a party of Indians, supposed to number about one hundred and fifty, had attacked a train of ten wagons about 17 miles from Fort Richardson and killed the trainmaster and six teamsters. Five others escaped. Being at the fort at the time, he gave orders for the available troops to follow them with thirty days' rations and report at Fort Sill.

I told the general that I could not then tell what Indians they were, but thought that I could ascertain in a few days. Four days later the Indians came after their rations. Before issuing I asked the chiefs to come into the office, and told them of the tragedy in Texas, and wished to know if they could tell by what Indians it had been committed. Satanta immediately arose and said:

"Yes; I led in that raid. I have been told that you have stolen a large amount of our annuity goods and given them to the Texans. I have repeatedly asked for arms and ammunition, which have not been furnished, and made other requests which have not been granted. You do not listen to my talk. The white people are preparing to build a railroad through our country, which will not be permitted. Some years ago they took us by the hair and pulled us here close to Texas, where we have to fight them. When General Custer was here some years ago he arrested me and kept me in confinement several days, but that is played out now. There are never to be any more Kiowa Indians arrested. I want you to remember that.

"On account of these grievances a short time ago I took about one hundred of

my warriors, whom I wished to teach how to fight, to Texas, with the chiefs Satank [*Set-ängya*], Eagle-heart, Big-tree, Big-bow, and Fast-bear. We found a mule train, which we captured, and killed seven of the men. Three of our men got killed, but we are willing to call it even. It is all over now, and not necessary to say much more about it. We don't expect to do any raiding around here this summer. If any other Indian claims the honor of leading that party he will be lying to you, for I led it myself."

Satank, Eagle-heart, and Big-tree were present, and assented to the correctness of the statement made by Satanta. That they were guilty of murder in the first degree I had not the shadow of a doubt, and thought that forbearance in the case had ceased to be a virtue and would become a crime. I told the men to go to issuing and I would go to the fort (Sill). I went to Colonel Grierson's quarters and requested him to arrest Satanta, Satank, Eagle-heart, Big-tree, Big-bow, and Fast-bear on the charge of murder. Scarcely had the order been given when, to the surprise of all of us, Satanta took the post interpreter into Colonel Grierson's quarters. He had heard that there was a big Washington chief there (General Sherman), and he probably wished to measure up with him and see how they compared. When I started to the agency he said he would go with me, but some soldiers stepped in front of him with their revolvers and ordered him back, and he quietly obeyed. The colonel sent for Satank and Eagle-heart to go to his quarters. Satank went and was arrested. Eagle-heart got nearly there and saw Big-tree being arrested, and he turned and fled. Kicking-bird pled eloquently for the release of the three prisoners, although he entirely disapproved of their raiding.

A day or two after the arrest, Colonel Mackenzie, in command of the troops from Fort Richardson, arrived at Fort Sill and reported that the heavy and continued rains had obliterated the tracks of the raiding Indians so that they could not be followed. After remaining a few days, the colonel with his troops took charge of the prisoners to convey them to Texas for trial. Satank was so refractory that he was put into a wagon with two soldiers, and Satanta and Big-tree were put into another wagon. George Washington, a Caddo Indian, rode alongside of the wagons as they left Fort Sill. Satank called to him and said: "I wish to send a little message by you to my people. Tell them that I am dead. I died the first day out, and my bones will be lying on the side of the road. I wish my people to gather them up and take them home." Satanta also sent a message, saying: "Tell my people to take the forty-one mules that we stole from Texas to the agent, as he and Colonel Grierson require. Don't commit any depredations around Fort Sill or in Texas."

When about a mile from the post Satank sang his death song, and with his back to the guard drew the shackles off his hands by taking some of the skin with them. Then with a butcher knife which he had secreted, he started for the guard in the front part of the wagon, cutting one of the soldiers slightly in the leg. They both jumped out, leaving their guns. Satank picked up one of them and commenced loading it, wanting to kill one more man. Before he got it loaded he received several shots, and in twenty minutes died in much agony, gritting his teeth. Colonel Grierson had him buried at Fort Sill. He gave the Indians permission to take him up and convey him to their camp for interment, which they declined to do.

Mr Leeper, my interpreter, who has since been a practicing physician in Chicago, and Horace P. Jones, the post interpreter, attended the trial of Satanta and Big-tree at Jacksboro. The jury brought in a verdict of murder in the first degree, and sentenced them to be hung on the 1st of the following September. I had requested that they be not executed, and gave my reasons for thinking that such a course would have a better effect upon the Indians of the reservation. The judge wrote me that he approved of my request and would ask the governor to commute the sentence to life imprisonment, which was done. The Kiowas delivered to me the stolen mules, as Satanta requested.

Although Set-ängya was a bad Indian and deserved punishment, it is impossible not to admire the grim courage of the old man, as, true to his warrior oath to despise death, though laden with chains and surrounded by armed troops, he boldly sang his death song, and then, wrenching the manacles from his bleeding wrists, drove the guards from the wagon, picked up their abandoned guns, and coolly prepared to kill one more enemy of his race before he fell, shot to death.

WINTER 1871-72 (1872-73)

A part of the Kiowa camped during this winter on *Ä'-giäni P'a*, "Long-tree creek," a branch of Elk creek of upper Red river. The name is indicated on the Anko calendar by the figure of a tree below the winter mark. The remainder of the tribe camped on the Washita, near Rainy mountain. During this winter the Kiowa were visited by a large party of Pawnee, who came to make peace. They came on foot and remained a long time, returning with many horses given them by their hosts. On the Set-t'an calendar the event is indicated by a representation of three characteristic Pawnee heads above the winter mark.

This was the first friendly meeting within the memory of the two tribes. The Pawnee first came to the Wichita, their near relatives, and then announced their intention to visit the Kiowa to make a treaty of peace. The Kiowa debated the matter for some time, but finally agreed, and after the visit dismissed their guests with many presents of horses. The older men describe the identical horses which were given. In the fall of 1873 another large party of the Pawnee visited the Wichita and remained some time. On their return home they gave such an account of their experience that the entire tribe decided to remove to the south from Nebraska, where they were constantly harassed by the Dakota. The matter was brought to the attention of the government and a new reservation was selected for them in Indian Territory (Oklahoma), to which they removed in the spring of 1875 (*Report*, 90).

From the concurrent notices by Battey, Grinnell, and the Indian Commissioner, together with the statements of a number of Indians, it is plain that in this instance the author of the calendar has made an error in the date, which should be the winter of 1872-73. As the Indians tell it, the Pawnee came late in the fall, after the Kiowa had left *Ä'-giäni P'a*. The explanation may be in a confusion between the visit of the Pawnee and that of the Pueblos (see winter 1872-73).

In regard to this Pawnee visit, which led to the removal of the tribe to Indian Territory, Grinnell says that in the summer of 1870 Lone-



FIG. 151—Winter 1871-72 (1872-73)—Pawnee visit; camp on Long-tree creek.

chief led a large party of the Pawnee southward to visit the Wichita. Again in the winter of 1871-72, the same chief, with a party, started on another visit to the Wichita, but for some reason turned back. The next winter (1872-73) in consequence of renewed inroads of the Dakota, the Pawnee were thrown into an unsettled condition and the question of removal to a safer situation began to be seriously discussed. It was finally decided to send a small party under Lone-chief and one or two others to the southern tribes to learn how these would look upon a general Pawnee migration into Indian Territory. The delegates visited the Oto, Kansa, Wichita, Comanche, Kiowa, and Apache, and were everywhere received in a friendly manner. The Pawnee then invited the chiefs of the various tribes to meet them at the Wichita camp, where the Pawnee speaker broached the proposition, stating that his people wished to be at peace and had made up their minds to come and live with their friends in the south.

They received a cordial invitation from all the chiefs of the different tribes, who said that they had good land and plenty of buffalo for them, and the result was that in 1873 the first party moved south and was followed by others, until in 1875 the whole tribe had removed from Nebraska to the Indian Territory (*Grinnell, Pawnee, 1*).

Grinnell is not entirely consistent with himself, but in another place says that the first expedition under Lone-chief took place "the following summer in August" of 1869 or 1870, and that it was on that occasion that the Pawnee visited and made peace with the Kiowa, and afterward visited the Comanche (*Grinnell, Pawnee, 2*).

The Quaker teacher, Battey, was with Kicking-bird in the Kiowa camp on Cache creek on the arrival of the Pawnee dancers, numbering forty-five, in March, 1873. He gives an extended account of their reception and performance:

A party of Pawnees came in last evening, giving notice of their arrival by their headman and two or three others coming into camp, while the main body remained 2 or 3 miles distant. This morning a public reception was given them.

The party was seen coming over a ridge in single file, bearing a white flag. Approaching to within 20 rods, they planted their flag, upon which was painted the single letter P, and sat down in a line on each side of it, facing the village. After sitting in this manner for perhaps half an hour, during which they maintained entire silence, and preliminary arrangements for their reception were made in the camp, the chiefs, followed by most of the headmen, and these by the young men, women, and children, went forth to welcome them. Upon drawing near to them, the Kiowa chiefs walking with a slow step and dignified mien, some of the old women set up a chant in a shrill voice, whereupon the head chief of the Pawnees and two or three others, perhaps the nearest in rank, arose, and with a quick, firm step approached the Kiowa chiefs, and after embracing them retired to their former position.

Others of the Pawnees came forward, a few at a time, until all had embraced and been embraced by the Kiowa chiefs and headmen. The women, remaining some distance behind, renewed their shrill chant from time to time. Some of the Pawnees occasionally placed a shawl or embroidered blanket upon the shoulders of a Kiowa, while several of the old men passed along in front of the whole line of the visitors, shaking hands with them. After this the Pawnees set up a weird song, during the continuance of which Kiowa fathers, each carrying a small child in his arms, bearing a piece of stick in its little hands, young girls, and occasionally a woman, would

approach the Pawnees, and selecting someone, would present themselves before him, holding out the stick. Thereupon he would arise, place his hands upon the donor's head in a solemn, reverential manner, as if blessing, pass them down the sides, following the arms, take the stick, and sit down. Each stick thus given was a pledge from the giver to the receiver for a pony, to be given when the visitors are ready to return to their country. Old men, from time to time addressing the Kiowas, urged them to liberality, to show the largeness of their hearts and the warmth of their friendship by giving ponies to these poor Pawnees, who had come so far to see them and renew their friendship, and not allow them to return on foot, as they came. I know not how many ponies were thus pledged to them, but there must have been many.

At the conclusion of the ceremony the Pawnees arose in a body, ceased their song, took up their flag, and a part following one Kiowa chief and a part another, accompanied them to their lodges to partake of their hospitality. The head chief, with four or five others, including the flag bearer, accompanied Kicking-bird to his lodge, thus becoming his guest.

In the afternoon the visitors gave a Pawnee war dance, of which Battey wisely remarks:

I shall not render myself ridiculous by attempting to describe that which is indescribable. . . . Individuals occupied the intervals between the dances by narrating their own former valorous exploits, not even omitting that their victims were in some instances Kiowas, concluding by throwing their war implements upon the ground with such force, in case of tomahawk or hatchet, as to cause the metal to ring. Then, with gesture of covering it up, they would go away, leaving it to lie there; thus intimating that, though they had been foolish and fought, they now rejoiced in the beams of peace and hoped that the red men everywhere might live in peace one with another; all of which was received by the Kiowas with the loud response of "How! how! Yes! yes!" (*Battey, 20*).

SUMMER 1872

This summer there was no sun dance, and in consequence the medicine lodge does not appear on either calendar.

For this summer the Anko calendar has two connected human figures, together with what he explains as a "mule's head" above the medicine pole. Between the forks of the pole is another human head, where he commenced to draw the first figure, but found that he had no room. The joined human figures refer to a drunken fight between Sun-boy and T'ené-zépte, "Bird-bow" (?), growing out of some whisky smuggled in by Mexicans, in which Sun-boy shot his antagonist with an arrow. The mule's head indicates a raid into Kansas, in which the Kiowa captured a large number of mules. This may have been the same raid in which Bíako was shot.

The Set-t'an calendar has a picture of a man wounded in the chest, with a tree above his head to show that the event occurred in summer. This has reference to a skirmish with the whites in which a Mexican captive named Bíako (Viejo) was shot, but afterward recovered. He was one of those selected for confinement in Florida a few years later,



FIG. 152 — Summer 1872—Viejo shot.

and is still living and with the tribe. The fight took place in the course of a raid into Kansas by a small party of Kiowa under T'ené-'taide, "Bird-chief," which was undertaken against the protests of the other chiefs, who desired to be at peace with the Americans. Near Medicine-lodge creek, not far from the Kansas line, they were joined by some of the Osage, and soon afterward met a party of white men in wagons, whom they thought were surveyors; a skirmish ensued, resulting in the wounding of the captive and one of the Osage.

WINTER 1872-73

Téguägo Tsän-de Sai, "Winter that the Pueblos came." In this winter, while most of the Kiowa were encamped on the Washita near Rainy mountain, a party of Pueblo Indians and Mexicans visited them to trade *biscocho*, or Pueblo bread, and eagle feathers for horses and buffalo robes. The Kiowa were very fond of this bread and willingly gave a pony for a small bag of it. The figure on the Set-t'an calendar represents a Pueblo Indian, with his hair tied in a bunch behind,



FIG. 153—Winter 1872-1873—Pueblo visit; battle tipi burned.

driving before him a burro (donkey) with a pack upon his back. The Kiowa say that the Pawnee visited them late in the fall, while the Pueblo party came in the winter, stopping south of Stumbling-bear's present camp. From an early period the Pueblo Indians of the Rio Grande had carried on a trade with the southern plains tribes, with which they appear to have been always on friendly terms. This was the next to their final visit.

The Anko calendar records the accidental burning of a noted heraldic tipi, hereditary in the family of the great Dohásän. It was known as the *Dó-güägyü güät*, "Tipi with battle pictures," being ornamented with battle pictures on the northern side and horizontal stripes of black and yellow alternating on the southern side; it occupied the second place from the entrance in the camp circle on ceremonial occasions. A small facsimile model has been deposited by the author in the National Museum. Plate LXXIX shows the appearance of the buckskin model when open and spread out.

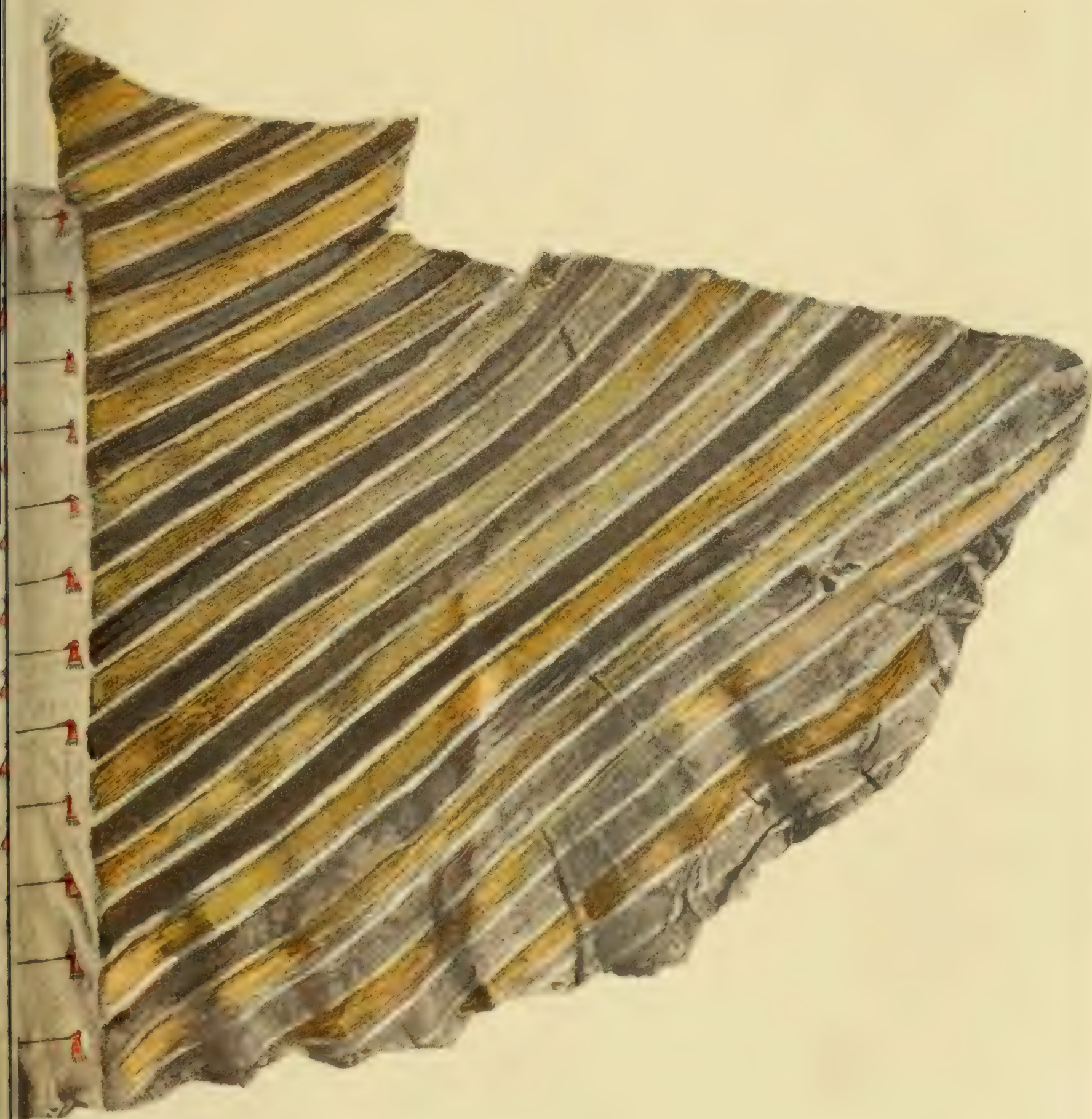
The Kiowa, like the plains tribes generally, had an elaborate system of heraldry, exemplified in the painting and decoration of their shields and tipis. Every prominent family had its heraldic tipi, which had its appointed place in the great camp circle of the tribe and descended by inheritance from generation to generation. The system may form the subject of a future study by the author.

SUMMER 1873

Iyúgüa P'a K'ádó, "Maggot-creek sun dance," so called because held on that stream, known to the whites as Sweetwater creek, a tributary of the North fork of Red river, near the western line of the reser-



Q



PIPI OF BATTLE PICTURES

vation, just within the Texas panhandle. The dance was made by Dóhéñte, "No-moccasins," the successor of Anso te; it occurred in June and was attended by Battey, who describes it in detail in his book. There were present most of the Kiowa, Comanche, and Apache, with a large part of the Cheyenne and Arapaho, who discussed the question of starting another war in consequence of the continued imprisonment of Set-t'aiñte and Big-tree. Although Battey himself had come to bring them the news of the further detention of these chiefs on account of the Modok war, he was able, with the help of Kicking-bird, to dissuade the Indians from their hostile intent.

While the dance was in progress Pa-kónkya ("Black-buffalo") "stole" the wife of Guibadái, "Appearing-wolf," in retaliation for which the injured husband killed seven of Pa-kónkya's horses and took a number of others, in accordance with the tribal custom; he threatened also to kill the seducer, so that the *Toñkónko* Dog-soldiers had to interfere. The killing of the horses or the seizure of the property of the offender by the injured husband is the regular tribal punishment for such offenses, but in extreme cases, as in this instance, the Dog-soldiers interfere. The same event is recorded on both calendars, the Set-t'an picture being sufficiently suggestive, while the Anko calendar has above the medicine pole the figure of a horse's head struck by a bullet, with another head below it to represent the woman.



FIG. 154—Summer 1873—Pa-kónkya's horses killed.

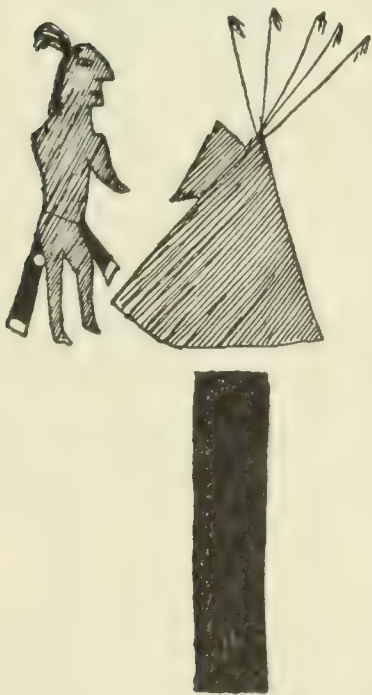


FIG. 155—Winter 1873-74—Set-t'aiñte returns; Lone-wolf's son killed.

WINTER 1873-74

Set-t'aiñte Tsän-de Sai, "Winter of Set t'aiñte's return." The notable event of this season was the return of Set-t'aiñte from prison October 8, 1873. The figure above the winter mark on the Set-t'an calendar shows Set-t'aiñte, distinguished by his red headdress, coming into his tipi, which was conspicuous by being painted entirely red, with red streamers at the ends of the poles. The red marks above the tipi are intended to represent his return footprints. The event is noted at length in another place.

The Anko calendar commemorates the killing in Mexico of two "sons" (i. e., a son and a nephew) of Lone-wolf, rudely indicated below the winter mark by a human figure wearing a *k'ódalpü* or shell breastplate, with several flying bullets at the side.

Battey, who was in the Kiowa camp when the news arrived, has this entry in his diary under date of January 13, 1874:

This is a day of wailing in our camp. News arrived this morning of the death of two Kiowa braves, the one a son of Lone-wolf, the other of Red-otter [*Ápeñ-gúădal*]

Lone-wolf's brother. They were killed while on a raid in Mexico. Lone-wolf's son was wounded in the knee a year ago last summer while raiding in Texas, and came near losing his life. This, it seems, did not satisfy his thirst for blood, and the Kiowa determining to raid no more in Texas, he, the past autumn, went into Mexico, where it appears he has been killed. The camp resounded with the death wail, the song of mourning for the unreturning braves mingled with the war whoop. This was revived at stated intervals for several days (*Battey, 21*).

According to information given by the Indians to Battey, Lone-wolf's son, with a few other young Kiowa warriors, had accompanied a raiding party of Comanche into Mexico. On their return they were attacked at a night camp by Mexican troops and the two Kiowa were killed. The remaining Kiowa at once returned home with the news, but the Comanche crossed the Rio Grande into Texas and began a series of raids on Nueces river, when they were attacked by soldiers and several killed. The rest started for home, but meeting another party of Comanche, they turned back with them and were again attacked by the troops, losing, in both encounters, twenty-two killed. A desire to avenge these losses had much to do with the ferment among them which led to the outbreak in the following summer; they also tried to make it appear that the Kiowa had been raiding in Texas when killed, in order to involve that tribe with themselves, although it seems

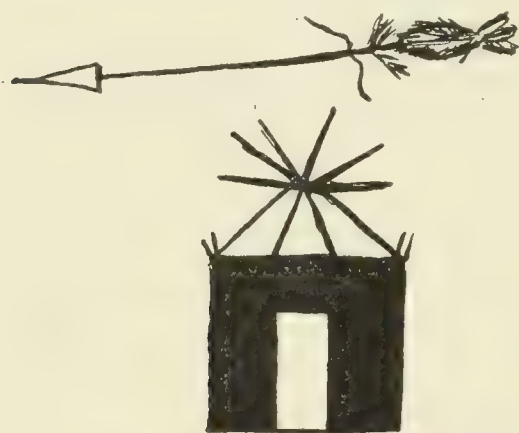


FIG. 156—Summer 1874—The medicine lance; Bluff-end sun dance.

beyond question that the Kiowa were killed in Mexico and had not been engaged in the Texas raids.

Lone-wolf went to Mexico to bury the body of his son, the sun dance having been postponed in the meantime, and it is said that on finding it he knelt down beside it and vowed to avenge his death with the life of a white man. A lot of government horses were soon afterward stolen from Fort Concho (or Clark?), in Texas, and it was charged that this was done by Lone-wolf and his party on their return, although they denied it. The killing of his son was the chief reason assigned by Lone-wolf for his part in the outbreak which followed (*Battey, 22; Report, 91*).

SUMMER 1874

Tsó'kakánă-de K'ádó, "Sun dance at the end of the bluff." The dance was held at a place called *Tsó'kakán*, "end of the bluff," on the south side of the North fork of Red river, above the junction of Elm fork, at a mountain called by the Kiowa the "Last mountain," in Greer county, Oklahoma. On the Anko calendar the bluff is indicated by a projection from one side of the medicine pole.

At this dance Set-t'aiñte, in thanksgiving for his release from prison, gave his famous *zébat*, or medicine arrow-lance, to Ä'to-t'aiñ, "White-cowbird," brother of the chief Sun-boy, thus resigning his own chieftainship in favor Ä'to-t'aiñ. There were only two lances of this kind in the tribe, both being regarded as medicine lances, the other belonging to Tăn-gúädal (see winter 1868-69).

WINTER 1874-75

Gi-edal Ehótal-de Sai, "Winter that Big-meat was killed." The southern plains tribes, including a large part of the Kiowa, went out together on the warpath. After the fight at the Wichita agency, at Anadarko, in August, 1874, as previously detailed, the Comanche warriors who were implicated fled to the Staked plain, and the Kiowa to the head of Red river, with the troops in pursuit. While there a small party of the Kiowa went on a horse-stealing raid into New Mexico, resulting in an encounter, in which they killed two men, captured a woman, and ran off several horses. On their return they stopped to rest in the mountains, and were stretched at ease telling stories when they were suddenly attacked by the soldiers. Gi-edal was mortally wounded at the first fire, but propped himself against a rock and succeeded in killing one soldier and wounding another before he died. Another Kiowa was killed also, but the troops were finally repulsed. The Set-t'an calendar shows Gi-edal,



FIG. 157—Winter 1874-75—Gi-edal killed; Kiowa imprisoned.

who is distinguished by buffalo horns on his war-bonnet, wounded, with the blood gushing from his mouth.

At the close of the outbreak, a number of warriors were selected and sent to confinement at Fort Marion, Florida. The figure on the Anko calendar is intended to represent Fort Sill, with the imprisoned Kiowa warriors confined before being sent to Florida.

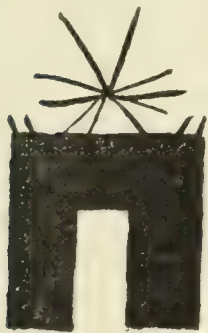


FIG. 158—Summer 1875—Love-making spring sun dance.

SUMMER 1875

K'ioñ-Toñ K'ádó, "Love-making spring sun dance."

It was held at a spring in a bend on the north (reservation) bank of North fork of Red river, a few miles from *K'ób-akán*, "Last mountain" (Mount Walsh, in Greer county). As conditions were yet unsettled on account of the outbreak, the Kiowa were escorted on this occasion by a body of troops.

The spring takes its name from the fact that on one occasion, while the Kiowa were encamped there, some young men "stole" two girls who had gone to the spring for water. On the Anko calendar the place is identified by a figure of a woman above the medicine pole.



FIG. 159—Winter 1875-76—Sheep and goats issued.

WINTER 1875-76

In this instance the same event is recorded on both calendars by means of the figure of a ram or goat in connection with the winter mark.

In the various engagements during the last campaign and at the final surrender, several thousand ponies and mules had been taken from

the Indians. These were sold under direction of Colonel Mackenzie, who determined to invest the proceeds in sheep and cattle for the benefit of the Indians, with the idea of changing their habits from hunting to pastoral. A detachment of troops, accompanied by several Kiowa and Comanche, was sent to New Mexico, where they purchased thirty-five hundred sheep and goats, with which they returned in November, 1875, the flock being driven by Mexican herders. Many died on the journey, and the remainder arrived in poor condition, but recuperated in the spring, when they were distributed to those Indians deemed most deserving. Stumbling-bear received one hundred, and others smaller flocks. Six hundred cattle were also purchased from the same fund and distributed in the same manner (*Report*, 92).

Just previous to the outbreak the Kiowa, Comanche, and Apache, with the few of the Delaware tribe living among them, were officially reported to have over sixteen thousand horses and mules. At the close of the troubles they had only six thousand remaining, having lost ten thousand within a little more than a year. They had also a small number of cattle before the outbreak, but no sheep (*Report*, 93).

This was the first general attempt by the Kiowa to raise stock (except horses). Although at the start the experiment promised well, the herds were soon reduced by neglect, killing for food, etc, and in a few years the last animal was gone. It is said that some of the sheep escaped to the Wichita mountains, where for several years they roamed wild.



FIG. 160—Summer 1876—Horse-stealing sun dance.

SUMMER 1876

Iyúguá P'a Pähä'dal K'ádó, Sun dance at the fork of Maggot (Sweetwater) creek, or *Paí-tälyí-de Tseñko Ed-ásémk'opa-de K'ádó*, "Sun dance when Sun-boy's horses were stolen." This dance was held at the junction of Sweetwater creek and the North fork of Red river, on the western line of the reservation. While it was in progress some Mexicans stole all of Sun-boy's horses. After the dance the Kiowa pursued the thieves, but their horses gave out, and they failed to recover the stolen animals. On both calendars the event is indicated by means of figures representing horse tracks near the medicine lodge.

Dó-héñte, "No-moccasins" ("Tohaint" of Battey) had died in the preceding fall and had been succeeded as *taíme* priest by Set-dayá-iti, "Many-bears," who made this dance. He was the uncle of Set-dayá-iti, who was killed by the Ute, and the cousin ("brother") of Taímete, who afterward had charge of the *taíme*.

WINTER 1876-77

This winter is distinguished on the Set-t'an calendar by the killing of the woman A'gábaí, "On-top-of-the-hill," by her husband Íäpa,

"Baby," in the Kiowa camp, which at that time was a short distance below Fort Sill. The figure shows the woman above the winter mark, with a character intended for a cliff beside a river (the wavy line) to indicate her name. Although the killing occurred in summer, it was some time after the sun dance, and hence is marked as happening in winter. The woman was sick and promised Íāpa, who was considered a doctor and was then unmarried, that if he would make her well she would marry him; he succeeded in curing her and she married him, but soon after left him, and for this he stabbed her.

The incident is thus noted by Agent Haworth in his official report:

A young man in a mad fit killed his wife. On hearing of it, I called a council of Kiowa chiefs and asked them to take some action about it. I explained to them the penalties the white man's law inflicted for such terrible crimes. After a short consultation they decided they would do with him whatever I said—kill him, if I said so. They said, however, that he was young and foolish and did not know the white man's laws or road, but they would arrest him as soon as he could be found and bring him to me, and I could do with him as I desired. Two of their number, Dangerous-eagle and Big-tree, about nine o'clock the same evening brought him to my house, having made the arrest themselves. I sent them on with him to the guard-house, where he was confined for several months, most of the time with ball and chain, working around the garrison in full view of his people. After his arrest they made the request that, in consideration of his ignorance of the white man's laws, his life be spared. I told them he would not be hurt, but the arrest was made without any promises of mercy being exacted or made, no soldiers being required, and done simply on my suggestion or request (*Report, 94*).

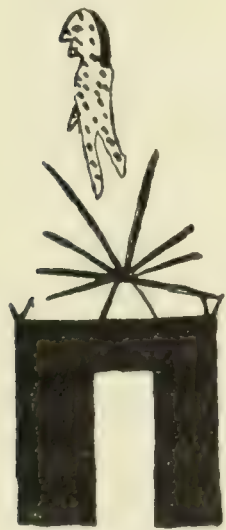


FIG. 162—Summer 1877—Measles sun dance.

Anko's calendar commemorates the fact that he, with about twenty other Kiowa braves, enlisted as scouts this year at Fort Sill, remaining in the service two or three years. The figure below the winter mark shows a man holding a gun and wearing a peculiar variety of hat then used by the scouts. The first Kiowa scouts were enlisted at the time of the surrender in 1875.

SUMMER 1877

Dü'-mü'tánü' P'a K'ádó, "Star-girl-tree river sun dance," or *Á'gat-hódal K'ádó*, "Measles sun dance."

This dance took place within the present Greer county, Oklahoma, on Salt fork of Red river, called by the Kiowa the "Star-girl-tree river," from a noted tree which originated from a sapling used in a medicine sacrifice to the "Star girls" or Pleiades. On this occasion the troops accompanied the Kiowa on their buffalo hunt and afterward escorted them to the place selected for the dance.



FIG. 161—Winter 1876-1877—A'gábaí killed; scouts enlisted.

This summer is noted for an epidemic of measles, which is said to have killed more children in the tribe than the measles epidemic of 1892. It is represented on both calendars by a human figure covered with red spots, above the medicine lodge. Strangely enough there is no notice of this epidemic in the report of the agent for this year, which may perhaps be accounted for by the fact that he was himself prostrated by sickness which occasioned his retirement in the following spring. From the report of the agent for the Cheyenne and Arapaho, however, we learn that the epidemic broke out among the latter tribes in April, and in spite of the best efforts of the physician, killed two hundred and nineteen children, so that almost every family was in mourning. In happy contrast to the more recent experience of the Kiowa, the government school was temporarily turned into a hospital, with the teachers for nurses, so that although seventy-four children were sick at the same time, not one died (*Report*, 95).

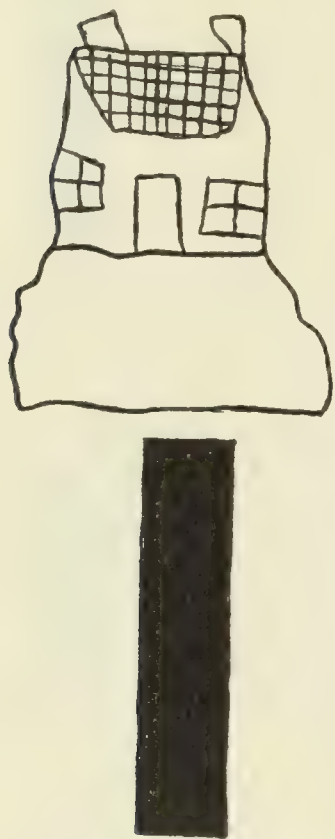


FIG. 163—Winter 1877-78—Camp at Signal mountain; hunt on Pecan creek.

WINTER 1877-78

K'op-taíde-do-tsédal-de Sai, "Signal-mountain winter." During this winter a part of the tribe camped near Mount Scott, while the remainder camped west of Fort Sill, at the foot of Signal mountain, called by the Kiowa "the mountain with a house built upon it," referring to a stone lookout station built during the last Indian outbreak. The figure on the Set-t'an calendar is sufficiently suggestive of a house upon a mountain.

Anko records the fact that he hunted buffalo this winter on Elk creek (on upper Red river), called by the Kiowa *Dónä'-i P'a*, "Pecan river." The rounded figure below the winter mark is intended to represent a pecan nut.

This winter is noted for an epidemic of fever, which is mentioned in the report for 1878. In the fall of 1877, under Agent Haworth, as an inducement to the Indians to abandon their roaming habit, the government built houses for ten prominent chiefs of the three tribes, including Stumbling-bear, Gaápiatañ (Heid-sick), Guñsádalte (Cat), and Sun-boy, of the Kiowa, and White-man and Taha, of the Apache. These were the first Indian houses ever built upon the reservation, excepting two erected by the military. At first the new owners continued to live in the tipis, which they preferred from long usage, but by the further gift of beds and chairs they were induced to go into the houses. An attempt to get the Indians to cut the logs and do a part of the work themselves under instruction seems to have been a failure. The houses were reasonably good frame structures of three rooms, having doors, glass windows, and substantial double fireplaces and chimneys of stone; they cost \$600

each (*Report*, 96). In 1886 there were nine Kiowa families living in houses (*Report*, 97), but a few years later most of these dwellings were vacant or occupied by white renters, the Indian owners being again in the tipis.

SUMMER 1878

Adäldü K ádó, "Repeated sun dance." This is the second recorded instance of this kind, the first having occurred in 1842. On the Set-t'an calendar it is indicated by the figure of two adjoining medicine lodges, and in the Anko calendar by a double-forked medicine pole. The two dances were held on the North fork of Red river. Part of the Kiowa had gone to the plains on the western part of the reservation to hunt buffalo, while the others remained at home. Each party, unknown to the other, promised to make a sun dance, in consequence of which one dance was held at the regular period, after which the leaves were renewed and another dance was held for another four days. On this occasion also the buffalo hunters, who made one sun dance, were escorted by a detachment of troops as a protection and as a precaution against their committing depredations (*Report*, 98).

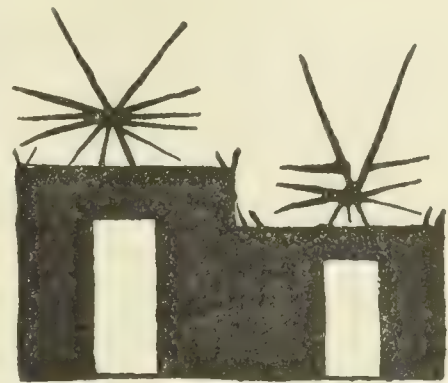


FIG. 164—Summer 1878—Repeated sun dance.

WINTER 1878-79

The event noted for this winter on both calendars is the killing of Ä' to-t'aiñ, "White-cowbird," the man to whom Set-t'aiñte had given his medicine lance five years before, thus resigning his chieftanship to him (see summer 1874). On the Set-t'an calendar it is indicated by a human figure painted red and with the red headdress, both characteristic of Set-t'aiñte, above the winter mark, and with the medicine lance or *zébat* in front. On the Anko calendar it is indicated by the figure of the arrow-lance below the winter mark. By a curious coincidence Set-t'aiñte himself committed suicide in a Texas prison about the same time.



FIG. 165—Winter 1878-79 — Ä'to-t'aiñ killed.

Ä to-t'aiñ was the brother of the chief Sun-boy, and on account of his relationship and the dignity conferred upon him by Set-t'aiñte, if not for his personal merits, was a prominent man in the tribe. On account of having this lance he was also known as *Zébä-dó-k'ía*, "Man-who-has-the-arrows," i. e., "Arrowman." He was killed by Texans while with a party who had gone, by permission of the agent and accompanied by an escort of troops, to hunt buffalo on upper Red river in what is now Greer county, Oklahoma; the Texans shot him through the body and both arms, scalped him, and cut off a finger upon which was a ring. The hunt occurred in the winter season, but the buffalo were now so nearly exter-

minated that it was practically a failure and the Indians suffered much in consequence. The killing with its sequel is thus noted in the official report:

Captain Nolan, commanding the company of troops who were escorting the Indians while on the hunt, had, in view of the scarcity of buffalo, allowed parties, each accompanied by a squad of soldiers, to go off from the main camp to points where it was said straggling droves of buffalo could be found. While a Kiowa man was one day a short distance from the camp of one of these parties and alone he was run onto by a company of Texas state troops, shot down, killed, and scalped. A few moments after this grand military feat was performed the little Indian camp was discovered, and they were just in the act of covering themselves with additional glory by charging it and butchering the squaws and papposes when the squad of colored troops presented themselves, mounted on the bare backs of their horses, having had no time to saddle them, and the warlike band disappeared. Upon the return of the Indians to the agency a request was made that the Texans who murdered the Kiowa should be arrested and punished by the authorities, expressing at the same time no intention of avenging his death themselves. It seems that after waiting some time and concluding that nothing could or would be done by the authorities, a party of young Kiowas, headed by the brother of the murdered man, quietly left their different camps, dashed hurriedly across the line into Texas, killed and scalped a white man they met in the road, and returned as secretly to their camps, apparently feeling that they had avenged the death of their brother and friend by this taking of one scalp.



FIG. 166 —Summer
1879—Horse-eat-
ing sun dance;
Boy shot.

A party of troops was sent after this avenging party immediately on learning of this last killing, but so quietly had they proceeded that no trace of them could be found or any definite information procured on which to base measures for their punishment. The white man killed was named Earle, and the agent expresses his belief that if proper satisfaction had been made in the first place by punishing the murderers of the Kiowa or making presents to his family according to the Indian custom, the avenging party would not have entered Texas on their deadly mission (*Report*, 99).

SUMMER 1879

Tséñ-píü K'ádó, "Horse-eating sun dance." It is indicated on the Set-t'an calendar by the figure of a horse's head above the medicine lodge. This dance was held on Elm fork of Red river, and was so called because the buffalo had now become so scarce that the Kiowa, who had gone on their regular hunt the preceding winter, had found so few that they were obliged to kill and eat their ponies during the summer to save themselves from starving. This may be recorded as the date of the disappearance of the buffalo from the Kiowa country. Thenceforth the appearance of even a single animal was a rare event. The official report says:

In the month of June last a portion of each band was permitted to go to the western part of the reservation to subsist themselves awhile on buffalo, deer, etc, as the supplies for the year had been so nearly expended it was not seen how they could

all be fed until those for the next year were received. But again they failed to find game sufficient to feed themselves, and the Kiowa, who while out were engaged in their annual medicine dance, suffered some with hunger. I think their failures in finding buffalo the past year, and their consequent suffering while out, will have a good effect in causing them to abandon their idea of subsisting in this way and to look to their crops and stock for a support. It is a fact worthy of note that the reports of the agents show the value of the robes and furs sold by the Indians now belonging to the Kiowa, Comanche, and Wichita agency for the year 1876 amounted to \$70,400; for 1877, \$64,500; for 1878, \$26,375; while in 1879 only \$5,068 was received, showing that buffalo hunting is not a thing of profit as it once was; and, besides, the most serious drawback to the Indians is the lack of the buffalo meat which at one time helped to subsist them, and which, added to the insufficient rations furnished by the government, kept them partly comfortable. As that supply is cut off, the Indian must go to work and help himself or remain hungry on the rations furnished (*Report*, 100).

The Anko calendar records the fact that while the Kiowa were driving away their issue of beef cattle some mischievous boys, shooting at the cattle with their arrows, accidentally shot another boy in the shoulder, but not fatally. In giving this explanation it was evident that Anko did not want to mention the boy's name, probably because he was now dead.

WINTER 1879-80

Tä'kágyä Sai, "Eye-triumph winter." The name and story furnish a curious illustration of Indian belief. *Káäsä'nte*, "Little-robe" (or Little-hide), with two or three others, had gone to the North fork of Red river to look for antelope. According to another story they went to look for their old enemies, the Navaho, who, it seems, although now removed to their former reservation in western New Mexico, still occasionally penetrated thus far. Among them was a man named Pódodal (a variety of bird), who claimed to understand the language of owls, a bird believed by the Kiowa to be an embodied spirit. While resting one night in camp this man warned Little-robe not to go to bed, but to round up the ponies and keep watch over them, for an owl had told him that the Navaho would try to steal them that night. During the night Pódodal fired at something in the darkness, and on looking in the morning they found the trail of a man, and blood drops, which they followed for a long distance, but at last gave up the pursuit. That night the owl again came and told Pódodal that the wounded Navaho was lying dead beyond the point where they had turned back, and that he (the owl) would go and fetch him.

On rising in the morning Pódodal saw some strange-looking object lying on the ground in the lodge, and on examining it it proved to be the eye of a dead Navaho. On the advice of Pódodal they then abandoned the hunt and returned to the Kiowa camp, on a small branch of Apache creek (*Sémüt P'a*), an upper branch of Cache creek. They



FIG. 167—Winter 1879-80 — Eye-triumph winter.

carried with them the eye, hung at the end of a pole after the manner of a scalp, and danced over it as over a scalp on arriving at the camp on the small stream, since called *Tä'-kágyä P'a*, "Eye-triumph creek" from this circumstance.

It should be added that there were some skeptics who laughed at the whole story and declared that the eye was that of an antelope which Pódodal had secretly shot.

On the Set-t'an calendar the event is indicated by a figure intended to represent a scalp at the end of a pole, carried by a man wearing a striped robe to indicate his name, Little-robe. On the Anko calendar there is a representation of a scalp on a pole under the winter mark.

SUMMER 1880

This summer there was no sun dance, perhaps on account of failure to find buffalo, and instead of the medicine lodge the summer is indicated on the Set-t'an calendar by the figure of a leafy tree above a square figure, which is explained as meaning that the author of the calendar stayed at home, the lines being intended to show a space inclosed in a fence after the manner of a white man's farm. A similar device is several times used for the same purpose in later years. Under date of September 1, 1881—a year later—the agent says:



FIG. 168 — Summer
1880—No dance;
Päbóte died.

Last year I was encouraged in the belief that the Indians under my charge were rather disposed to lay aside these ideas and ceremonies, from the fact that very little was heard of their medicine men during the year, and the Kiowas failed to hold their annual "medicine dance." The latter part of this year, however, from some cause, their medicine men have been unusually active, as I learn has been the case at other agencies, and the Kiowas have recently returned from the western part of their reservation, where they held their annual dance (*Report*, 101).

The Anko calendar records the death of a chief named Päbóte, "American-horse." He was a man of unusual height and size, hence his name, which signifies literally an animal taller than the average. He was buried in a coffin by the whites at the agency nearly opposite Fred's store. On the calendar the square figure below the picture of the man, and connected with it by a line, is intended to represent the coffin.

On first explaining the calendar, in 1892, Anko evaded the mention of this man's name, in accordance with the Kiowa custom which forbids naming the dead, but three years later consented to do so. The same objection was frequently encountered, but finally overcome in regard to other names on the calendars.

WINTER 1880-81

For this winter the Set-t'an calendar has a house over the winter mark, but he could not remember whose house it was intended to represent. In Captain Scott's notes it is said to be Paul Set-k'opte's new

house, but Set-k'opte did not return from the east until 1882. It is probably intended to represent a new house built for another, Paul Zoñtam, who returned from the east in 1881 as an ordained Episcopal minister.

The Anko calendar records the visit of a large party of Pueblo Indians from New Mexico, indicated by a human figure below the winter mark with the hair bunched up in Pueblo fashion. There were about a hundred of them and they stopped at various camps of the Kiowa and Apache, remaining some time. This was the last time the Pueblos ever visited these tribes. In the following fall Big-bow returned their visit

SUMMER 1881

K'ádó Sü'lü'ti, "Hot-sun dance," or *Dóguätał Sáomhü-pü-de K'ádó* "Sun dance when blood came up from the young man." It was called the "hot sun dance" from the fact that it was held late in August, instead of in June as usual, the delay being due probably to the difficulty of finding a buffalo for the purpose; after a long search a solitary bull was found. The dance was held on North fork of Red river, a short distance beyond the end of the mountains.

The close upright lines between the forks of the medicine pole on the Anko calendar he explains to indicate the heat, probably from the Indian gesture sign for fire, made by holding the hand with thumb and fingers together pointing upward, and separating them with a quick motion, the concept being the upward motion of the sparks and smoke.



FIG. 170—Summer 1881—Hemorrhage or hot sun dance.

least as rare among Indians as among whites.

The suggestive figure on the Set-t'an calendar records an incident which gives another name to this sun dance, a young man, the adopted son of Poor-buffalo, having been attacked by hemorrhage. He was called *Mäsá'te*, "Six," from the fact that he had six toes on each foot; his brother, *Bóhé*, still living, is said to have six fingers on each hand, Such instances of malformation are at

WINTER 1881-82

İmdádóá-de Saiá, "Winter when they played the *dó-á* medicine game." This winter is noted for a great *dó-á* game played under the auspices of two rival leaders, each of whom claimed to have the most powerful "medicine" for the game. The game was played in the winter camp on the Washita, near the mouth of Hog creek, the Kiowa leader being Pa-tepte, "Buffalo-bull-coming-out," alias *Dátekâñ*, now dead (see summer 1882), while his opponent was the Apache chief and medicine-



FIG. 169—Winter 1880-81—House built; Pueblo visit.

man Dävéko. The Kiowa leader was recognized distinctively as having "medicine" for this game, and it was said that he could do wonderful things with the "button," making it pass invisibly from one hand to another while he held his hands outstretched and far apart, and even to throw it up into the air and cause it to remain there suspended invisibly until he was ready to put out his hand again and catch it; in other words, he was probably an expert sleight-of-hand performer. His Apache rival, Dävéko, is known as a medicine-man as well as a chief, and is held in considerable dread, as it is believed that he can kill by shooting invisible darts from a distance into the body of an enemy. On this occasion he had boasted that his medicine was superior for the *dó-á* game, which did not prove to be the case, however, and as the Kiowa medicine-man won the victory for his party, large stakes were wagered on the result and were won by the Kiowa. It is said that this was a part of Pa-tepte's effort to revive the old customs and amuse-



FIG. 171 — Winter 1881—
82—*Dó-á* game; medicine tipi.

ments on a large scale. The game was witnessed by a large concourse, all dressed and painted for the occasion. The picture on the Set-t'an calendar is very suggestive.

The name *dó-á* signifies the "tipi game," from *do*, tipi or house, and *a*, a game, because, unlike most of their games, it is played inside the tipi, being essentially a game for the long nights when the whole tribe is assembled in the winter camp. A similar game is found among nearly all our wild tribes; it is played by both sexes, but never together. In its general features it resembles our game of "hunt the button," the players forming a circle around the fire in the tipi, one-half of them playing against the others, sitting facing them on the opposite side of the fire. The leader of one party then takes the *k'übo* or button, a short piece of stick wrapped around the middle with a strip of fur and small enough to be concealed in the hand. Putting his closed hands together, he raises his arms above his head, clasps them across his chest or puts them behind his back, endeavoring to pass the *k'übo* from one hand to another, or from his own hand to that of his next partner, without being perceived by any of the opposite party, all the while keeping time to the movements of his hands with one of the peculiar *dó-á* songs, in which the members of his party join.

When the opposing player thinks he has detected in which hand the other has concealed the stick, he indicates it with a peculiar jerk of his thumb and index finger in that direction, with a loud *Tsoq!* (Comanche for "That!"); if he has guessed correctly, he scores a certain number of points, the account being kept by means of a bundle of green-painted tally sticks. He then takes the *k'übo* and begins a similar set of movements in time to another song, in which his partners join; so the

game goes on far into the night, until the contest is decided and the stakes won by one side or the other. It is a most animated and interesting game, of which they are very fond, and frequently at night in the winter camp the song chorus may be heard from several games in progress simultaneously, the high-pitched voices of the women in one tipi making a pleasing contrast to the deeper tones of the men in another.

The Anko calendar notes the building of a medicine tipi by Dátekâñ, for the purpose of bringing back the buffalo (see summer 1882). The tipi is shown below the winter mark.

SUMMER 1882

This summer Dohásän, whose hereditary duty it was to supply the buffalo for the sun dance, failed to find even one, and in consequence there was no dance. For this summer the Anko calendar notes the death of Pätso'gáte, "Looking-alike," a daughter of Stumbling-bear, noted for her beauty. In accordance with the tribal custom in regard to speaking of the dead, Anko for a long time refused to mention her name. The incident is indicated by the figure of a woman where the medicine pole is usually pictured.

The Set-t'an calendar notes the excitement caused by the efforts of Dátekâñ, or Pa-tepte, to bring back the buffalo, also noted by Anko in the preceding winter season. The figure represents the medicine-man seated in his sacred lodge, wearing his ceremonial red blanket trimmed with eagle feathers, and with a buffalo beside him.

The buffalo had now disappeared, and with it the old Indian life, the sacred sun dance, and all else that they most cherished threatened also to pass away. According to Kiowa mythology, the buffalo originally lived in a cave underground, from which they had been released by their great hero *Sinti* and scattered over the prairies for the benefit of his children, the Indians. Somewhat similar beliefs are entertained by other tribes. As the buffalo had disappeared with the coming of the white man, who, by reason of his superior knowledge, was rapidly dispossessing the Indian, the native tribes almost universally believed, not that the buffalo had been exterminated—a calamity too terrible for their comprehension—but that it had been shut up again underground by their enemy, the white man, in order more easily to accomplish their subjection. It was believed that by prayer and sacred ceremonial the buffalo might again be released to furnish food and life for the Indian, and in every tribe there sprang up medicine-men who undertook to effect the restoration.

Among the Kiowa this task was adventured by a young man named Dátekâñ, "Keeps-his-name-always," who announced early in 1882 that

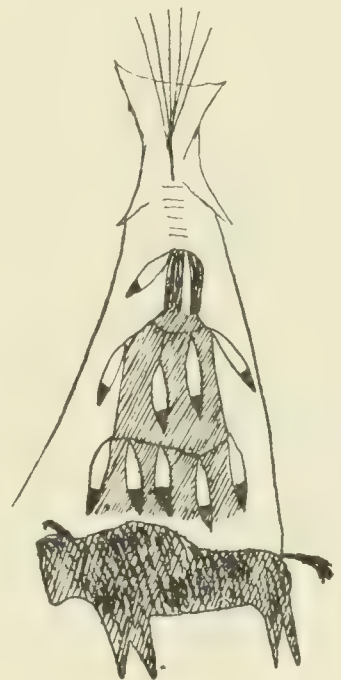


FIG. 172—Summer 1882—
Buffalo medicine; Pät-
so'gáte died.

he had had a vision in which he received a mission to bring back the buffalo. Accordingly, he began to make medicine and assumed the name of Pá-tépte, "Buffalo-bull-coming-out," in token of his new powers. He was already noted in other directions as a medicine-man, and had been the winner in the great *dó-á* contest mentioned in the calendar of the preceding winter. It is possible that his success on that occasion encouraged him to this attempt, as he began his buffalo medicine immediately afterward. He erected a medicine tipi, in front of which he set up a pole with a buffalo skin upon it, and prepared for himself a medicine shirt ornamented with blue beads, over which he threw a red blanket trimmed with eagle feathers. Thus attired, and carrying a sacred pipe in his hand, he began his mystic ceremonies within the tipi, and from time to time announced the results to the people, most of whom believed all he said and manifested their faith by gifts of blankets, money, and other property; they were further com-



FIG. 173—Winter 1882-83—Bot-édalte dies; Grass leases; Camp on Pecan creek.

manded to obey him implicitly, on pain of failure of the medicine in case of disobedience. His pretensions were opposed by the younger men among the returned prisoners from the east, who used all their influence against him, but with little effect. After nearly a year of medicine-making, being unsuccessful, he announced that some one had violated some of the innumerable regulations, and that in consequence his medicine was broken for the time and they must wait five years longer, when he would begin again. Before that time had elapsed, however, he died, but his claims and prophecies were revived and amplified five years later by Pá-iñgya (see summer 1888).

WINTER 1882-83

For this winter the Set-t'an calendar records the death of a woman named Bot-édalte, "Big-stomach," indicated by the figure of a woman with an abnormal abdomen above the winter mark.

The Anko calendar notes that the Indian police camped this winter on *Dónü'i P'a*, "Pecan creek" (Elk creek of North fork of Red river), indicated, as in 1877-78, by the figure of a pecan nut below the winter mark. The Texas cattle trail crossed at that point and the police were stationed there to keep the cattle off the reservation. Quanah, chief of the Comanche, was there also in the interest of the cattlemen, and it was through his persuasion that the allied tribes finally agreed to lease their grass lands.

Anko notes also that the Indians now "began to talk about grass leases," but that as yet there was no grass money paid. It is indicated on the calendar by three circles for dollars below the winter mark, with a +, intended for a picture of the Indian gesture sign for "cut off" or "stop," made by bringing the extended right hand downward in front of the other, as if cutting a rope with a knife-stroke.

On this subject the agent says, under date of August 17, 1883:

The grass question seems to be the most difficult thing I have to contend with. I find it impossible to keep trespassing cattle entirely off the reservation, and we are now crowded on all sides. It seems to do very little good to put them off, for it is found that cattle that have just been driven off will come back on the reservation as soon as the police force advances. Our Indians are not disposed to rent the grass, yet if it is used it seems they should be paid for it. . . . The grass should be utilized in some way that will benefit the Indians, and if it is not possible to supply them with herds sufficient to consume it, it does seem as if the grass should be rented and the Indians receive the money for it (*Report*, 102).

The final result was the establishment of the system of grass leases.

SUMMER 1883

Á'dalk'atói K'ádó, "Nez Percé sun dance," so called on account of a visit from the Nez Percés, called by the Kiowa the "people with hair cut off across the forehead." The figure above the medicine pole on the Anko calendar is intended to represent a man in the act of cutting off his front hair. The Set-t'an calendar has beside the medicine lodge the figure of a man wearing the peculiar striped blanket of the Nez Percés. This sun dance is sometimes known as *Máp'ódal K'ádó*, "Split-nose sun dance," because held on the Washita on pasture lands inclosed by a cattle man known to the Indians by that name.

On account of difficulties with the whites, the Nez Percés of Chief Joseph's band had left their homes in eastern Oregon in the summer of 1877, and after a retreat of a thousand miles were intercepted in Montana by General Miles, when within a few miles of the British border, and compelled to surrender. They were brought as prisoners to Fort Leavenworth, and thence removed, in July, 1878, to a reservation assigned to them in Indian Territory. The climate and surroundings proving entirely unsuited to them, they were returned to reservations in Washington and Idaho in 1885, their numbers in the meantime having been reduced from about four hundred and fifty to three hundred and one, about one-third of their whole number having died. It was while domiciled in Indian Territory that they visited the Kiowa and other tribes, dancing with the Kiowa and Apache at the head of *Sémät P'a*, "Apache creek" (upper Cache creek), and attending the Kiowa sun dance, which was held on the north side of the Washita, about ten miles above Rainy-mountain creek, near where now is Cloud Chief. This was the first time the Kiowa had ever seen the Nez Percés, although they had a dim traditional memory of them in their old northern home.

In the spring of this year the keeper of the *taíme* medicine, Set-dayá-ite, "Many-bears," died, and the image was taken by Taímete, "*Taíme*-man," who continued to hold it until his death in 1894.



FIG. 174—Summer, 1883—Nez Percé sun dance.

WINTER 1883-84

For this winter the Set-t'an calendar has the picture of a house with smoking chimney beside a tipi. It appears to be a canvas house, such as those Indians in a transition state sometimes use. Set-t'an explains it to mean that Big-tree was given a stove by the government and put it into a large tipi which he occupied; but Scott's informant, who is corroborated by Anko and others, explains it as meaning that Gákiñāte, "Ten," the brother of Lone-wolf, built a house this fall on the south side of the Washita, about opposite Cobb creek. Stumbling-bear says that he himself had received a stove as far back as 1875, two years before the government built his house.

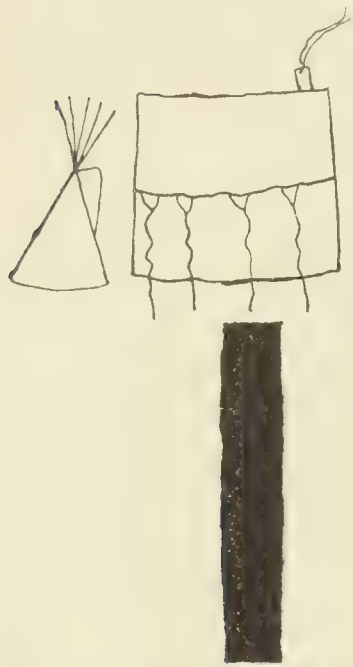


FIG. 175—Winter 1883-84
—House built; children taken; Sioux dances.

The Anko calendar records the taking of a large number of children to the Chilocco Indian school, near Arkansas City, Kansas. The heavy drafts made during the term to furnish children for Chilocco and other schools very considerably reduced the number of pupils in attendance at the reservation schools; according to the agent's statement, seventy were thus taken at one time (*Report*, 103). The figure below the winter mark is intended to represent two wagons filled with children.

Anko notes also that a party of Dakota came down to dance with the Kiowa, indicated by the feather dance-wand at the side of the winter mark.

SUMMER 1884

There was no sun dance this summer, and the Set-t'an calendar has only the figure of a tree to indicate summer, with a figure below intended to represent an inclosed field, implying that the owner stayed at home. Concerning this the agent says, under date of August 28:

The Kiowas have danced less this year than usual, and they seem to have given up their annual medicine dance, for as yet they have said nothing about it. The holding of this dance has always been a great occasion and considered one of their most important ceremonies, for they have believed it absolutely necessary to secure their health and success in all their undertakings, either at war or in the chase. They have generally gone out on the plains from 40 to 60 miles from the agency and been absent from five to six weeks. On several occasions since the buffalo disappeared, they have suffered very much with hunger while out, and I hope we have heard the last of the dance (*Report*, 104).

The calendar of Anko for this summer notes the hauling of government freight by the Kiowa, including himself, indicated by a figure of a wagon where the medicine pole would otherwise be. This was in agreement with a plan inaugurated several years before, by which those



FIG. 176—Summer 1884 — No sun dance; Hauled freight.

Indians who had suitable teams and wagons—the latter furnished by the government—were permitted to haul supplies for the agency and were paid for their labor as an inducement to get them to adopt the white man's industries. As there was no railroad near at that time, most of the freight had to be hauled overland from Caldwell, Kansas, a distance of 150 miles. For such labor during this year the Indians received nearly \$8,000, and performed the work cheerfully and in a satisfactory manner (*Report*, 105).

WINTER 1884-85

The Set-t'an calendar has a house above the winter mark, which is interpreted to mean that the Kiowa camped all winter on the Washita near Set-k'opte's house, just above the agency. This was the fact, but another informant suggests that the original intention was to record the event that the Kiowa about this time began to build houses for themselves. On this subject the agent says at this time:

These Indians retain much of their roving disposition, and except during the cropping season do not camp long in one place, but do not go far from their fields. Few of the Kiowas, Comanches, and Apaches have houses, and most of them live in tents. This will probably be the last of their savage customs to be abandoned (*Report*, 106).

In 1886 it is officially stated that only nine Kiowa families were living in houses, all the rest being in tipis (*Report*, 107).

The Anko calendar records the stealing of another man's wife by Tón-ak'á, "Notched-tail," i. e. "Water-turtle," a noted medicine-man, for which the woman was whipped and a number of Tónak'á's horses were killed by the injured husband. The turtle below the winter mark indicates the event.

SUMMER 1885

Píhó K'ádó Sän, "Little Peninsula sun dance," so called because it was held in a peninsula formed by a bend of the Washita about twenty miles above the agency; the same place where another dance, the *Píhó K'ádó*, had been held in 1839. The figure on the Set-t'an calendar shows the medicine lodge within the bend (see summer 1839). The figure on the Anko calendar is

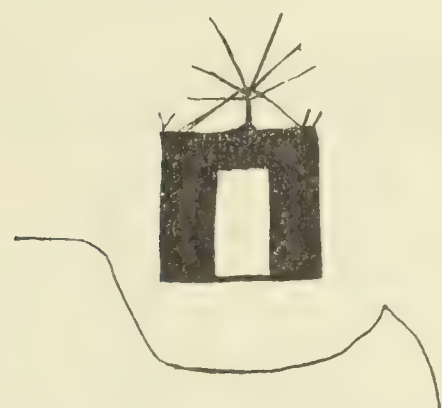


FIG. 178—Summer 1885—Little Peninsula sun dance; Grass payment.

intended to represent the medicine pole with the buffalo head fastened below the forks.

On this occasion Dohásän had to go to the Staked plain to find a buffalo for the purpose. This dance was the first held by Taímete, the successor of Set-dayá-ite. On this point the agent has to say:

I mentioned in my last report the fact that the annual medicine dance of the Kiowa would not be held that year, and I expressed the hope that they had abandoned



FIG. 177—Winter 1884-85—Winter camp; Tón-ak'á's elopement.

it; but their old medicine man has since died, and his successor, unfortunately a young man of little ability or character, ordered that another be held this year.

The Comanche have no such ceremonial as an annual dance, and the other tribes of the reservation have no medicine dance, but the Cad-does frequently meet together and dance for enjoyment, as white people do (*Report*, 108).

The Anko calendar notes that the Comanche received their first grass money this summer, shown by the circles for dollars below the medicine pole, but with nothing to indicate the tribe. The Kiowa did not make leases until a year later. For some reason, perhaps on account of a change of agents which occurred about this time, there is no notice of this payment in the official report.

WINTER 1885-86

FIG. 179—Winter 1885-86—Camp burned.

For this winter both calendars record a prairie fire which destroyed all the tipis and much of the other property of T'ébodál's and Â'dal-pepte's camps, northwest of Mount Scott, while most of the tribe had gone to the agency for rations. The Set-t'an calendar indicates the event by means of the picture of a tipi, streaked with red for the fire, above the winter mark. The Anko calendar has below the winter mark a peculiar symbol, which he explains to mean the rising flames.

SUMMER 1886

There was no dance this summer, owing to the failure to find a buffalo for the purpose, consequently everybody remained at home—indicated on the Set-t'an calendar by the figure of a leafy tree, for summer, above an inclosure, intended to represent a field.

As there was no dance, the Anko calendar for this summer lacks the medicine pole, while by means of a star and several circles he records the fact that he enlisted in the agency police force, and also that there was another payment of grass money by the cattlemen, this time to the Kiowa, being the first they had received.

FIG. 180—Summer 1886—No sun dance; Police-men; Grass payment.

FIG. 181—Winter 1886-87—Peyi commits suicide.

For this winter both calendars note the suicide of Peyi, "Son-of-the-sand," nephew of the great chief Sun-boy. Having taken a horse without the owner's permission, he was reproved for it, which so hurt his feelings that, saying, "I have no father, mother, or brother, and no one cares for me," he



WINTER 1886-87

went out and shot himself with a revolver. Indians are very sensitive to reproof or ridicule, and suicides among them from this cause are more frequent than is generally supposed.

The Set-t'an calendar has above the winter mark the figure of a man holding a pistol, and with a wound in his side, the blood gushing from his mouth. The Anko calendar has a pistol below the winter mark. Two circles (dollars) above the winter mark have evidently been placed there inadvertently.

SUMMER 1887

K'adóliü P'a K'ádó, "Oak creek sun dance." According to the Set-t'an calendar, there was no sun dance this summer and everybody remained at home—indicated as before by the figure of a leafy tree above a square inclosure. This, however, is a mistake. The agent states that "the Kiowas held this year a sun dance with my permission, but with a distinct understanding that it should be the last, and (it) was not of a barbarous nature" (*Report*, 109). The dance was held near the mouth of *K'adóliü P'a*, "Oak creek," a small southern tributary of the Washita above Rainy-mountain creek, and takes its name from the stream on which it was held. As the wild buffalo had now been exterminated, the animal for this occasion was bought from a ranchman named Charles Goodnight, who had a small herd of domesticated buffalo in northern Texas.

The Anko calendar has several circles, for dollars, below the medicine pole, to indicate another payment of grass money, of which again there is no official record.

The name of the creek on which the dance was held was originally *Do'gótä P'a*, "Oak creek," but in consequence of the death of a woman named *Do'gótä* about 1891, the name was tabooed according to tribal custom, and the stream is now known as *K'adóliü P'a*, from an old word which conveys the same idea.

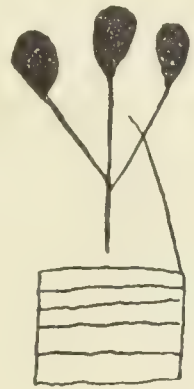


FIG. 182—Summer 1887—No sun dance (?); Grass payment.



FIG. 183—Winter 1887-88—Cattle payment.

WINTER 1887-88

This winter the Indians received a large number of cattle from the stockmen in part payment for their grass leases; the remainder was paid in money. These were the first cattle received from that source. A number of the Indians refused to accept them and insisted on money, while quite a large number refused to have any part in the leases, believing it to be a plot to deprive them of their lands. The event is indicated on both calendars by the figure of a cow's head in connection with the winter mark.

SUMMER 1888

By a mistake Set-t'an depicts a medicine lodge for this summer instead of for the one preceding. No sun dance was held this year, owing to the opposition of the new agent. In his official report he states that early in May the chiefs and head men of the Kiowa had called to request permission for the holding of the dance at the regular season, but that on investigation he became convinced that it should not be allowed and so informed the Department, which instructed him to prevent it, even by calling on the military if necessary. He says:

On receipt of this information I at once communicated the fact to the Indians, but could not get them to promise to abandon it. I informed them that on the slightest intimation that any preparation was being made for the celebration of the dance I would be compelled to call on the military and cause the arrest of every Indian who expressed a determination to participate in the same. Many of the young men, belonging to the worst element, privately declared their intention of holding the dance, but as yet nothing has been done in that direction. I am firmly of the opinion I will be able to prevent it without the aid of the troops (*Report, 110*).

The Anko calendar records for this summer the preaching of the prophet Pá-iñgya. It is indicated by a figure intended to represent a flying bullet, referring to his claim of invulnerability.



FIG. 184 — Summer 1888—Sun dance (?); Pá-iñgya's prophecy.

Pá-iñgya, "In-the-middle," had commenced preaching during the previous winter, reviving the doctrine of the return of the buffalo, which had been taught by Pa-tepte several years before (see summer 1882). He continued to preach and make medicine for several months, adding to his predecessor's prophecies another of the invulnerability of his followers and the speedy destruction of the whites, so that for a while the excitement assumed a dangerous form. In the official report for 1887 the agent briefly notes that—

The Kiowas were troublesome in the early spring, owing to the bad advice of their medicine-men and chief Lone-wolf, and refused to plant their seed and took their children from school. Later on they went to work, but would have made a much better showing in their crops had they planted earlier (*Report, 111*).

According to Pá-iñgya's pretensions, he was the legitimate successor of Pa-tepte, with all of his predecessor's powers and considerably more of his own. He predicted the near approach of a mighty whirlwind, which would blow away the whites and all Indians living among them or following their customs. After the whirlwind would come a great prairie fire, which would burn for four days and consume the agency buildings, schools, and all that the white man had established in the country, together with any whites left by the whirlwind. Having thus cleared the way, he would then restore the buffalo and game, with all the old Indian life. His followers were commanded to resume at once their aboriginal dress and weapons, with all the old habits. He made

a sacred new fire with the block and stick, according to the primitive Indian method, and gave the fire thus made to all his disciples to be used instead of that procured from matches or flint and steel; he refused to give any of this sacred fire to those chiefs and others who were regarded as being on the white man's side, including Stumbling-bear and Sun-boy. He established his headquarters on upper Elk creek, near Lone-wolf's camp, in the western part of the reservation, to which he commanded all the faithful to repair in order to escape the destruction which was to come upon the whites and their renegade supporters, and appointed ten assistant priests, to whom he delegated a share of his powers and duties. To quiet any fear of interference by the authorities, he claimed to have a medicine which would render his followers invulnerable, while he himself was not only invulnerable but could kill soldiers or other enemies by his mere glance, as by a lightning stroke, as far as he could see them.

His preaching roused great excitement among the Kiowa, nearly all of whom—excepting those of Stumbling-bear's and Sun-boy's bands—abandoned their homes and repaired to the appointed place on Elk creek, the parents taking their children from the schools in order that they might not be involved in the general conflagration and destruction. In the summer the prophet's son died, and he promised to raise him from the dead in the fall, but when the time came his medicine unaccountably failed.

The unrest among the Indians, for which no apparent cause could be assigned, greatly alarmed the whites, who feared that the Indians meditated an outbreak. As a precaution, the agent, Captain Hall, summoned a detachment of troops, and taking with him a small escort, went to the neighborhood of the prophet's camp and sent Stumbling-bear and Sun-boy to him to bring him and some of the prominent chiefs in order to discuss the matter. The result was that the Kiowa agreed to go home and await developments. As the time fixed for the fulfillment of the prophecy came and passed without event, they became convinced that they had been deceived and the excitement died out. In the meantime Pá-iñgya, who had before been poor and obscure, had become rich by the horses and blankets which he had received from the faithful; there were even those who were so uncharitable as to say that it was for this he had been working. Nothing was done to punish the prophet, who still lives, and when the news of the messiah came a few years later, he claimed it as the fulfillment of his prophecy. He has more recently assisted to revive the ghost dance at his home on the Washita.

WINTER 1888-89

The Set-t'an calendar records that the Kiowa were encamped during this winter on the Washita, near the house of Ä'tä lä'te, "Feather-head-dress", indicated by the figure of a tipi near a house above the winter mark.

The Anko calendar notes the death of the chief Paí-tälyí, "Sun-boy," shown by the figure of a man in a coffin, with a circle for the sun upon his breast. He died at Eoñte's camp, northwest of Mount Scott. Anko records also the fact that he split rails for himself this winter, shown by the figure of an ax immediately below the winter mark.



FIG. 185—Winter 1888-89 — Winter camp; Sun-boy died; Split rails.

SUMMER 1889

This summer there was no sun dance and everybody remained at home on his farm, the fact being indicated as before on the Set-t'an calendar by means of the figure of a leafy tree above a square inclosure intended to represent a field.

Anko records a receipt of grass money, indicated by several circles intended for dollars where the medicine pole is usually shown; also the death of a son of Stumbling-bear, indicated by the figure of a man wearing an eagle feather in his hair.

WINTER 1889-90

For this winter the Set-t'an calendar has only the figure of a tipi above the winter mark, to show that the Kiowa spent the season in their winter camp on the Washita.

The Anko calendar notes another grass payment, indicated by the circles representing dollars, and also a visit by the Kiowa to the Comanche to perform the

Íâm dance, indicated by the feathered dance-staff below the winter mark.

The name of this dance, *Íâm Guan*, is derived from *i*, "child or offspring," and *âm*, the root of the verb "to make," for the reason that one of its main features is the formal adoption, by the visiting dancers, of a child of the other tribe. The performance and dress somewhat resemble those of the Omaha dance, but only two men dance, while the rest sit around as spectators. There is an exchange of horses by the visited tribe for presents placed on the ground by the visitors, and at the end of the ceremony the boy adopted is formally restored to his people. This dance is found also among the Wichita and Pawnee and perhaps other tribes.



FIG. 187—Winter 1889-90 — Winter camp; Grass payment; *Íâm* dance.



FIG. 186—Summer 1889 — No sun dance; Grass payment.

SUMMER 1890

Ä'poto Etóðă-de K'ádó, "Sun dance when the forked poles were left standing." This summer the Kiowa were preparing to

hold the sun dance, when it was stopped by agent Adams, backed by military force. It has not been held since in the tribe. Both calendars tell the same story in the figure of the medicine pole standing outside the completed medicine lodge and decorations. Set-t'an has also the square inclosure to indicate that he remained at home, while Anko, by means of a row of circles, notes the occurrence of another grass payment.

The Kiowa had decided to celebrate their usual annual sun dance at the *Piho* or bend in the Washita, where they had already held it twice before, when the agent determined to prevent it. They were not disposed to yield, and had assembled in their great tribal circle of tipis, with the center pole of the medicine lodge already erected, having an old buffalo robe in lieu of a buffalo head and skin at the top, when word came that the troops were on their way to stop the dance, having been sent from Fort Sill for that purpose by request of the agent. The news was brought to Stumbling-bear, who had remained at home on account of the death of his son, by Quanah, chief of the Comanche, who advised him to send word to the Kiowa to stop, as the soldiers would kill them and their horses if they persisted. Stumbling-bear thereupon sent two young men to the sun dance camp to tell the Kiowa to disperse and go home, which, after considerable heated discussion, they finally did, leaving the unfinished medicine lodge standing. In the meantime the troops had arrived at the agency, but the Indians having gone home, they returned to their post.

Concerning this affair the agent says in his annual report:

There has been nothing of special note during the year, with the exception of the excitement raised in connection with the proposed sun dance. That matter having been fully laid before the department, it is hardly necessary to say more (*Report*, 112).

On the same subject the report of the Secretary of War says:

The commanding officer at Fort Sill reported July 19 that the Indian agent had notified him of the intention of the Indians to hold a medicine dance, and had asked for troops to prevent them from doing this. He was directed to be guided by instructions of last year on the subject, and consequently three troops of cavalry proceeded to Anadarko, Indian Territory, on July 20, . . . but the Indians having abandoned the plan of holding their dance upon the arrival of the troops, the latter, after remaining at the point for a few days, were withdrawn (*War*, 7).



FIG. 188—Summer 1890—Unfinished sun dance.



FIG. 189—Winter 1890-91—Sitting-bull comes; Ä'pi-atañ: Boys frozen.

WINTER 1890-91

Pá-ü'ngya Tsün-de Sai, "Winter that Sitting-bull came." This refers to the first coming among the Kiowa of Sitting-bull, the Arapaho prophet of the ghost dance, in the fall of 1890. The human figure

above the winter mark is intended for Sitting-bull. The first Kiowa ghost dance was held on this occasion on the Washita at the mouth of Rainy-mountain creek, and was attended by nearly the whole tribe. Even the progressive chief Stumbling-bear attended and encouraged the dance, in the hope and faith, as he says, that by so doing his youth would be renewed. About the same time the Kiowa sent Ä'piatañ, "Wooden-lance," to visit the northern tribes and the messiah himself for the purpose of investigating the truth of the reports. The event is recorded on the Anko calendar by means of the figure of a man wearing a head feather and a shell breastplate, as Ä'piatañ did when he started on his journey. He returned in February, 1891.

As the whole subject of the ghost dance has been exhaustively treated by the author in his report on "The ghost-dance religion," in the Fourteenth Annual Report, it is unnecessary to give here more than the reference by the agent in his report for 1891:

Ghost dance.—This has been a disturbing occurrence throughout most of the year. This form of dancing has been indulged in mostly by the tribes north of the river. The Kiowas sent some of their number to the north to investigate the matter. Ah-pe-ah-tone, the leader in this journey, returned in the early spring and brought such a report with him as thoroughly convinced the Kiowas of the falsity of the so-called messiah. They have danced little or none since his return. The Wichitas and Caddos have clung to the superstition and danced until spring. They were led to greater excess by the visit of Sitting-bull, the Arapaho prophet from the north, who is becoming rich in stock through the gifts of his followers. He has been absent in the north, but has now returned to the Cheyenne and Arapaho agency and will probably repeat his performances of last year. Our Wichitas have already commenced to dance again and the Comanches seem to be feeling the craze, and unless decided measures are taken, we will probably have a repetition of last year's scenes (*Report, 113*).

For the same winter, but above instead of below the winter mark, the Anko calendar records the death of three schoolboys, indicated by the picture of a boy in civilized dress holding a book. Their names were *Sétä*, "Small-cow-intestines;" *Ká-ikonhódal*, "Dragonfly," and *Mótsü-tsé*, from the Spanish *muchacho*, "boy," his mother being a Mexican captive. They were attending the government Kiowa school, and one of them had been whipped by a teacher, in consequence of which the little fellow, with the two others, ran away from school and attempted to reach their homes, some 30 miles out in the mountains. The same night a terrible blizzard came on, and after they had struggled painfully along nearly the entire distance they sank in the snow, exhausted by fatigue, cold, and hunger, and all were found a few days later lying together, frozen stiff, on the bleak slope of a mountain, by a search party of Indians. This occurrence nearly precipitated an outbreak, and for a time it was thought that troops would be necessary to quell the disturbance, but through the judicious management of Captain H. L. Scott, who was sent from Fort Sill to investigate and report on the situation, the Indians were quieted without resort to force.

In his official report, Captain Scott says:

It was learned that three Kiowa boys had run away from the Kiowa school on the 9th [of January, 1891], on account of a whipping the eldest one had received from one of the teachers, Mr Wherrit. They had been overtaken by a snowstorm, the most severe this country has seen for years, and had been frozen to death. The body of the eldest, "Sailor" [from Setä?], about 14 years old, had been found, and they were still searching for the other two. They had been trying to reach the Kiowa camp on Stinking creek. The talk about the threatening attitude of the Kiowas being inquired into, it was resolved into this, that some of the school children had said that "Mother Goodeye," a one-eyed Kiowa woman, related to one of the dead children, had said that if she caught Mr Wherrit she would stick a knife into him. This, coupled with the fact that the woman afterwards denied having said it, would not seem to demand the presence of two troops of cavalry. It was said that Mr Wherrit had hid himself the day before, and had fled the agency during the night to escape the coming wrath (*From report of Captain H. L. Scott to Post Adjutant, January 18, 1891; copy in Indian Office, 5070-1891*).

On the same subject the agent says:

The loss of the three boys who ran away from the Kiowa school and were frozen to death in the snow, was an occurrence which might have been productive of most serious results. It speaks well for the Kiowa Indians that it not only was passed without such consequences, but seems to have left no prejudice against the school. It has been most gratifying to me on several occasions during the year to note the growing spirit of self-control among these people, and their desire to stand by lawful authority (*Report, 114*).

SUMMER 1891

There was no sun dance, and consequently, instead of the medicine lodge, the Set-t'an calendar has the square inclosure to show that he stayed at home.

The event of the summer was the killing of P'ódalä'ñte (abbreviated *P'olä'ñte*), "Coming-snake," in Greer county, Oklahoma. He was shot by a young white man in self-defense, as it was claimed, while endeavoring to recover a horse which he said had been stolen from him; he had sent a boy after the animal, but the holders had refused to give it up except to the owner. P'ódalä'ñte himself then went after it and a dispute followed, resulting in his death. It is said he was shot as he was loosening his gun from its scabbard at the saddle. The Kiowa claim not to know the particulars, as no other Indian was with him at the time, but say that he was notoriously quarrelsome and rough in his manner. The shooting occurred opposite the mouth of Elk creek. It is indicated on the Set-t'an calendar by means of a human figure, with blood flowing from a wound in the side, standing above the square inclosure, with a snake behind it to show the name. Anko records it for the following winter, q. v.

The Anko calendar records for this summer a visit made by the Kiowa to the Cheyenne, indicated in the usual place for the medicine lodge by

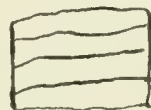


FIG. 190—Summer 1891—P'ódalä'ñte killed; Visit Cheyenne.

the figure of a tipi (i. e., camp), connected with which is a line with several cross marks, intended as a pictorial presentment of the tribal sign for "Cheyenne," made by drawing the right index finger several times across the left.

WINTER 1891-92

The Anko calendar records here the killing of P'ódalä'ñte, as just described for the preceding summer, the discrepancy arising perhaps from the fact that it occurred after the middle of summer. It is indicated below the winter mark by means of the figure of a man, with a bullet wound in his side, lying in a coffin or grave, and with a snake above the winter mark to show his name.



FIG. 191—Winter 1891-92—Soldiers enlisted; P'ódalä'ñte killed.

The Set-t'an calendar records the enlistment of the Indian troop at Fort Sill in the spring and summer of 1891. It was composed chiefly of Kiowa, and was organized as troop L of the Seventh cavalry, under command of Lieutenant (now Captain) H. L. Scott. It is indicated by the figure of a soldier above the winter mark.

SUMMER 1892

The event of this summer was the measles epidemic. The Set-t'an calendar indicates it by means of a human figure covered with red spots, and beside it the leafy tree and square inclosure to show that it occurred in the summer, when there was no dance and everybody remained at home. The Anko calendar has a similar red-spotted figure.

The epidemic broke out early in spring and continued through the summer; it began in the Kiowa school, and its terribly fatal consequences were due largely to the course pursued by the superintendent, who insisted on sending the sick children back to the camp, where it was impossible for them to receive necessary attention, instead of caring for them in the school. The result was that the infection spread throughout the Kiowa and Apache tribes, and as the Indians, in their ignorance, endeavored to *wash out the blotches* by drenching the children in cold water, nearly every case was fatal. Watching and anxiety brought fevers and other sickness to the parents, so that there was not a family in the two tribes that did not suffer the loss of a near relative. The feeling already existing among the Kiowa against the superintendent, on account of the death of the schoolboys the year before, was now so intensified that he was obliged to leave the country.

When the author returned to the Kiowa in the early summer of that year, the epidemic had nearly spent its force, although deaths were still occurring every day or two. The condition of the Indians was pitiable in the extreme; nearly every woman in the tribe had her hair cut off



FIG. 192—Summer 1892—Measles; Grass payment.

close to her head and her face and arms deeply gashed by knives, in token of mourning, while some had even chopped off a finger as a sign of grief at the loss of a favorite child. The men also had their hair cut off at the shoulders and had discarded their usual ornaments and finery. On one occasion, while driving near the camp, the author's attention was attracted by a low wail, and on looking for the cause he saw, sitting in the tall grass near the roadside, a bereaved father stripped to the breech-cloth, with his hair cropped close to the head and the blood dripping from gashes which covered his naked body; he did not look up or turn his head as the wagon passed, but continued the low wail, with his eyes cast to the ground. Wagons, harness, tipis, blankets, and other property were burned, and horses and dogs shot over the graves of their owners, to accompany them to the world of shades, the destruction of property in this way amounting to thousands of dollars. Every night and morning the women went into the hills to wail for their lost ones, and returned to camp with the blood dripping from fresh gashes in their faces and arms; this continued for weeks and months, far into the fall.

The responsibility for this terrible calamity rests upon the school superintendent, who sent the infected children into camp, and upon the agent who permitted it. The superintendent of the Comanche school, so soon as the disease appeared on the reservation, suspended teaching, turned the school into a temporary hospital, with the teachers as nurses, and stationed a guard of police to keep the parent from interfering with or withdrawing the children. The result was that not one died in his school and only one was affected. The census of the Kiowa and Apache tribes for this year shows a decrease from the preceding year of two hundred and twenty-one, or 15 per cent, among the two tribes, due almost entirely to this epidemic. The agent reports, after noting the mortality:

The above deaths occurred chiefly among the infants and young children, and can be attributed to the fact that in most every case they invariably immersed their sick in the water, thereby causing death in every case thus treated (*Report*, 115).

Dr J. D. Glennan, attending surgeon to the Indian troop at Fort Sill, had already distinguished himself at Wounded Knee two years before by his bravery and coolness in attending to the needs of the wounded and dying while bullets were flying thick around him. Now, when the epidemic broke out among the Kiowa, he gave his services with the same quiet devotion to duty, with such good result that, although for months the hospital camp was crowded with stricken Indians, whose relatives outside were dying all over the reservation, only six of those under his care died, and these not from the prevailing epidemic, but from a complication of diseases. In recognition of his services the Kiowa soldiers afterward raised a sum of money with which to purchase a horse for him, but as the doctor already had a horse, the testimonial took the form of a valuable piece of silver.

The Anko calendar has also a row of circles, representing dollars, to indicate a large payment of grass money by the cattlemen this summer. As by this time the Indians had learned that the leasing of their surplus grass lands was very much to their advantage, they held a council in February, 1892, to select delegates to go to Washington for the purpose of negotiating leases for the whole reservation; also to secure some back payments due from previous leases. Quanah, Lone-wolf, and Whiteman were chosen on behalf of the Comanche, Kiowa, and Apache, respectively, and proceeded to Washington, where they received the desired permission, under which authority leases were negotiated producing for the three tribes an average income of about \$100,000. On their return they received through a special agent nearly \$70,000 due under the new and old leases. This large payment gave occasion for general rejoicing and marked an era in their history. A large part of the money was invested in lumber for building permanent houses; so that in this way, and with the additional help of a small appropriation for the hire of carpenters, the agent reports about sixty houses built within the year, and says:

With the assistance of the Indian Office as to the pay of carpenters, together with the revenues from their grass leases, I see no reason why in the near future the tepee should not be banished and comfortable houses be substituted in their stead (*Report, 116*).

* * * * * *

Here end the yearly calendars. The subsequent events, including the unratified treaty negotiations and the present condition of the tribes, will be found noted in the preliminary tribal sketch.

KIOWA CHRONOLOGY

TERMS EMPLOYED

Now—*íñhogo* (*íñhoti* = this).

Then (past)—*óhyo* (same as *there*).

Second, minute, hour—unknown.

Day (from sunrise to sunset)—*kiädä*, abbreviated *kiä*.

A day (of twenty-four hours, i. e., one day and one night)—*pägo kiä'* (= "one day").

Dawn—*kiät'ä'* (literally, "first light," *t'ä*; *t'ä* seems to be connected with *t'aiñ*, white; *gyäpá-iñgya*).

Sunrise—*paí-báda*, literally, "the sun has come up."

Morning—*kiädä'*, literally, full day; cf. Day and Dawn; *gyäpá-iñgya*; very early in the morning—*gíñaga* (cf. Night); late morning, shortly before noon—*kyähín kiäsá*.

This morning—*íñhoti gyäpá-iñgya*.

Noon—*kiäsá*.

Afternoon (early, until about 3 oclock)—*dekiäsa*.

Afternoon (late)—*déhín*.

Evening—*dám-kónkya* (literally, first darkness); *dekómdóle* (-*gya*, from an archaic root referring to slight darkness).

Night—*gíñde*; *gíñägya*; one night, *pägo gi*.

Midnight—*gíñ-kopá-iñgya*; after midnight—*gíñä-tógya* (*togya*, after or past).

Tonight—*íñhoti gi*.

Today—*íñhoti kiä*.

Yesterday—*kiädédal*.

Tomorrow—*kyähínagä*.

Day after tomorrow—*añgádal kiägyä kyähín* (literally, a day—*kiägyä*; beyond or more—*añgádal*; tomorrow—*kyähín*); abbreviated, *añgádal kyähín*.

Day before yesterday—*tópde kiädédal*, literally, before yesterday; day next before, understood.

Journey—estimated by "darks," *koñ*, i. e., nights, instead of by "sleeps." Thus, if one asks how far away is a certain distant place, he is told that it is *pä'go koñ*, *yía koñ*, one dark, two darks, etc, i. e., that to reach it he must be one night, two ights, etc, on the road. They understand now how to measure short distances by the mile, *on*, literally, "a measure."

Week—The Kiowa did not originally group the days into weeks, but have now learned to make such a period, counting by Sundays or by the biweekly ration issue. Thus Sunday is *Dakiädä*, literally, "medicine day," i. e., "sacred day." One week is *pä'go Dakiädä*; two weeks, *yía Dakiädä*, etc. Next week—*ki-gía Dakiädä*, literally, after Sunday; also, *koñtä'kia*, literally, middle of (issue) nights.

One issue—*pä'go kónakán*, literally, one end or series (*akán*) of darks or nights. The regular ration issue is made every two weeks, on Friday, and as this is the great gathering time of the Indians, when they meet their friends and talk over matters of mutual interest, it has become a red-letter day and a starting point, like our Sunday.

Month or moon—*p'a*. The same word means river or stream, while *pa*, without the aspirate, signifies a buffalo bull.

Year—The years are counted by winters; one year, *pägo sai*, literally, one winter or cold season, from *sai-gia*, or *sai*, winter; plural, *säta*.

Days of the week (modern)—Sunday, *Dakiädä*; Monday, *Dakia kyähin*; Tuesday, Wednesday, Thursday, Friday, have no names, but are counted as two, three, four, or five days after Sunday; Saturday, *Dakia-sän*, literally, little Sunday.

Christmas (modern)—*Piä-kiädä*, “eating day,” or “feast day.”

Fourth of July (modern)—*Tsolai* (i. e., July, which they take to be the name of the day); *Tsä'nkia kiädä*, “race day,” because on that occasion races are held by the Indians at the agency and at Fort Sill.

THE SEASONS

The Kiowa distinguished only four seasons, unlike some of the agricultural tribes of the east, who distinguished five, separating the autumn season into *early*, when the leaves change color, and *late*, when the leaves fall, but assigning entirely different names to each. The Kiowa begin the year with the beginning of winter as fixed by the first snow-fall. This seems to have been the case also with the Pawnee and perhaps with other prairie tribes. To an agricultural people the renewal of vegetation would seem a more natural starting point.

The first season is called *Saigyä* or *Säta*, abbreviated *Sai*, which is considered to begin on the first fall of snow. In western Oklahoma this is generally about the first or middle of December, although on one occasion, about ten years ago, this occurred as early as October. Cold weather and frost may come, but it is not called *Saigyä* until snow falls.

Next comes *Áségyä*, spring. This is an archaic term which cannot be analyzed. It is sometimes called by the more modern name of *Són-páta*, “grass springing.” It is considered to begin when the grass and buds sprout and the mares foal (about first of March), and is known to be near at hand when the breasts of the eagles begin to turn white and when the panther whelps are born. The old men say that one half of the month *Ka'guät P'a Sän* belongs to *Sai-gyä* and the other half to *Áségyä*.

The third season is *Paigyä* or *Paíta*, abbreviated *Pai*, summer. The name seems to have a connection with the word for sun, *pai*. It begins after the grass has ceased sprouting (*sónpáta*) and is considered to continue until fires are needed in the tipis at night, i. e., from about June to September. During this season the fires are made outside the tipis, or, rather, outside the leafy arbors under which the people sit and sleep during the hot weather.

Next comes the fourth and last season, *Paóngyä* or autumn. The term is archaic and seems to refer to the thickening of the fur (*pa*) of the buffalo and other animals as the cold weather approaches. It is sometimes called *Aídeñ-gyägúädal-ómgýä-i*, the time “when the leaves are red.” The season is supposed to begin when the leaves change color and fires become comfortable in the tipis at night, that is, about the first of September.

In addition to these recognized divisions the summers or warm weather periods, as distinguished from the winters, were usually counted by *k'ádós* or sun dances, which were commonly held once a year, the time being fixed by the whitening of the down on the cottonwoods, about the beginning of June.

The following table is a good approximation of the manner in which the Kiowa divide the year, beginning about October 1:

SAÍGYA: WINTER

Gákiñät'o P'a, *last half*.
 Ä'gâ'nti.
 Tépgañ P'a.
 Gañhíña P'a.
 Ka'gúät P'a Sän, *first half*.

ÁSÉGYA: SPRING

Ka'gúät P'a Sän, *last half*.
 Ka'gúät P'a.
 Aideñ P'a.
 Pai Ä'gâ'nti, *first half*.

PAÍGYA: SUMMER

Pai Ä'gâ'nti, *last half*.
 Pai Tépgañ P'a.
 Pai Gañhíña P'a.
 T'águñótal P'a Sän.
 T'águñótal P'a, *first half*.

PAÓNGYA: AUTUMN

T'águñótal P'a, *last half*.
 Gákiñät'o P'a, *first half*.

Autumn seems to be less definitely noted than the other seasons.

KIOWA MOONS OR MONTHS

While the Kiowa note the changes of the moon and have a fixed name for each moon or lunar month, it is not to be supposed that their system could have the exactness of the calendar systems of the more cultivated nations of the south, or perhaps even of the sedentary tribes of the east, whose interests so largely depended upon noting carefully the growth and ripening of crops, the appearance of the various species of fish in the streams, etc. Nevertheless, they have a system, imperfect though it be, and it can not be said of them, as Matthews says of some northern tribes, that "they have no formal names for the lunar periods." In this, as in other matters of tribal lore, they defer to the superior knowledge of certain old men who assume the position of experts on the subject.

The Kiowa recognize twelve or more moons or months, beginning the year, according to one authority, with the first cold weather, about the end of October, or according to other authority, with the first snow-fall, about a month or more later. They have seven distinct moon or month names, and some of these are duplicated and distinguished as *great*, *small*, or of *summer*, to make the full number for the year. These moons of course do not coincide closely with our calendar months, and as the system is necessarily imperfect, there is a discrepancy of authorities, some recognizing twelve moons while a few count as many as fourteen or fifteen, the additional names being a further duplication of some of the others, as already explained; all authorities agree on the first eight as here given, and all but one agree on the ninth, after which there is a discrepancy. The author has made no arbitrary attempt to harmonize conflicting statements, as the result would be artificial and not aboriginal; and we must expect a certain amount of uncertainty and disagreement on such a complicated subject among primitive people. Our own calendar system has been of slow growth, and more than one hundred million Europeans still refuse to accept it. The list here given is that obtained from Anko, the best calendar authority in the tribe, and is that generally accepted by the Kiowa. By means of tally dates from his picture calendar their periods can be pretty closely assigned, although, as will be noticed, even he varies a month in some instances in the course of three years. Some of the old men put another moon, *Pai Ka'gúāt P'a Sün* (see number 5), between *Pai Gáñhíña P'a* and *T'águñ'ótal P'a Sün*.

1. *Gákiñāt'o P'a* — "Ten-colds moon." It is so called because the first ten days of it are cold, a premonition of winter, after which it grows warm for a time; this moon is about equivalent to late September and early October. It is the first and last moon of the Kiowa year, the old year and the summer being considered to end with the full moon of this period, after which the winter and the new year begin; by the time this moon ends the leaves are off the trees; in talking with Anko on September 23 (1895) he said: "This is *Gákiñāt'o P'a*, but it is still summer. After the moon is full and again begins to wane, then winter has begun, and we are in the *winter half* of *Gákiñāt'o P'a*." Snow sometimes comes in this moon.
2. *Ā gá'nti* or *Ā'ga'ntsänha* (does not take *p'a*), from *ā gá'ntsän* — "wait until I come," or "I am coming soon." According to Kiowa folklore, this moon says to his predecessor, "You went, but did nothing. *Hítugū' ā'gá'ntsän*—wait, and I'll go, and I'll show what I can do in the way of storms and cold weather." This moon includes parts of October and November. A tally date is the lunar eclipse of November 4, 1892, which is noted on the Anko calendar as occurring in this moon. Some authorities speak of it also as *sä-kop p'a*, "midwinter moon," i. e., midway between two consecutive sun dances, which would seem to bring it nearer to December.
3. *Tépgañ P'a*, "Geese-going moon," so called because the geese now begin to pass overhead on their migration southward; it may be considered to include parts of November and December, and is sometimes called *Bonpä P'a*, "sweathouse moon," for some unexplained reason. (See number 9, *Pai Tépgañ P'a*.)
4. *Gáñhíña P'a*, "Real-geese moon," so called because in this moon the great southward migration of wild geese occurs; it may be considered to comprise parts of December and January, although some put it later, as one old man

talking on the subject on January 25, said: "We are now in the beginning of *Gaṇhíña P'a*."

5. *Ka'gúāt P'a Sän*, "Little-bud moon." This may be considered to include late January and early February; in this moon the first buds come out, especially those of the elm, called by the Kiowa *tá-ä*, or *gádal-ä*, "saddle-wood," or "buffalo-wood." The first part of this moon is regarded as belonging to winter (*saígya*), the latter part to spring (*áségya*). Anko says that the mares foal in this moon and that the white men (in Oklahoma) usually begin to plow. A tally date from his calendar makes a February event occur in this moon.
6. *Ka'gúāt P'a*, "Bud moon." It is sometimes distinguished from the preceding by adding *edal*, "great;" the buds are all out and it is now full (*áségya*), spring; it is considered to include parts of February and March.
7. *Aideñ P'a*, "Leaf moon." The leaves are all out by the end of this moon, which approximately comprises late March and early April. Anko remarks that the moon names already given, with the two *T'aguñótal P'a*, are all old recognized names, but that this moon has no proper name. It is here also that the discrepancy begins on the other lists; a tally date on the Anko calendar gives April 19 as belonging to this moon.
8. *Pai Ágá'nti*, "Summer *Ágá'nti*" (see number 2). This moon is so named because, in Kiowa folklore, it says to its predecessor, "Just watch me; pretty soon I'll make it hot. Spring (*áségya*) ends and summer (*paígya*, *pai*) begins after this moon is full and begins to wane; it may be considered approximately to include late April and early May, but a tally on the Anko calendar puts an event of June 14 within this period.
9. *Pai Tépgañ P'a*, "Summer *Tépgañ* moon" (see number 3). It is possible that this moon is so called on account of a northward migration of wild geese, although it seems too late in the season. According to the testimony of white observers on the Kiowa reservation, wild geese appear first in October, stay all winter in the lakes and ponds, and go north again in March and April. The wild ducks, in the rivers, remain all the year. The name may have kept this place as part of the series from the time when the Kiowa lived in the far north, where the seasons are of course later. It usually comprises parts of May and June, although in one place Anko puts the 4th of July in this moon; in other places he puts the same date in the next or second moon following. It is one of the summer moons.
10. *Pai Gaṇhíña P'a*, "Summer *Gaṇhíña* moon" (see numbers 4 and 9). This is also a summer moon, approximating June-July. Tallies from the Anko calendar put events of July 4 and July 20 within this moon, to which also he says belongs the time of school closing, about June 20.
11. *T'aguñótal P'a Sän*, "Little-moon-of-deer-horns-dropping-off," because the deer now begin to shed their horns. This is another summer moon, equivalent to July-August, and was considered to begin after the annual sun dance. Tallies from the Anko calendar give to it an event of July 29, and in one instance the celebration of July 4.
12. *T'aguñótal P'a (Edal)*, "(Great-) Moon-of-deer-horns-dropping-off," because when it is at an end, all the deer have shed their antlers. This moon comprises August-September; summer ends and fall (*páongya*) begins in the middle of this moon. It is sometimes also called *Aideñgúak'o P'a*, "Yellow-leaves Moon," because the leaves now begin to change color.

MOONS OR MONTHS OF OTHER TRIBES

Some extracts from standard authorities on other wild tribes may be of interest in connection with the moons or months of the Kiowa.

Hidatsa and Mandan.—"Many writers represent that savage Indian tribes divide the year into twelve periods corresponding to our months, and that each month is named from some meteorological occurrence or phase of organic creation observable at the time. Among others, Maximilian presents us with a list of twelve months; 'the month of the seven cold days,' 'the pairing month,' 'the month of weak eyes,' etc.; he introduces this list in one of his chapters descriptive of the Mandans. He does not say it is their list of months, but publishes it without comment, and yet it is presented in such a manner as to lead the reader to suppose that it is the regular and original Mandan calendar. Other authors present lists of Indian months in much the same way. As the results of my own observations, I should say that the Mandan and Minnetaree are generally aware that there are more than twelve lunations in a year, that they as yet know nothing of our manner of dividing the year, and that although, when speaking of 'moons,' they often connect them with natural phenomena, they have no formal names for the lunar periods. I think the same might be said of other tribes who are equally wild.

"The *Hidatsa* recognize the lapse of time by days, lunar periods, and years; also by the regular recurrence of various natural phenomena, such as the first formation of ice in the fall, the breaking of the ice in the Missouri in the spring, the melting of the snowdrifts, the coming of the wild geese from the south, the ripening of various fruits, etc. A common way of noting time a few years ago was by the development of the buffalo calf *in utero*. A period thus marked by a natural occurrence, be it long or short, is called by them the *kadu*, season, time, of such an occurrence. Some long seasons include shorter seasons; thus they speak of the season of strawberries, the season of serviceberries, etc., as occurring within the season of warm weather. They speak of the seasons of cold weather or of snow, of warm weather, and of death or decay, which we consider as agreeing with our seasons of winter, summer, and fall; but they do not regularly allot a certain number of moons to each of these seasons. Should you ask an interpreter who knew the European calendar what were the Indian names of the months, he would probably give you names of a dozen of these periods or natural seasons, as we might call them, corresponding in time to our months. In a few years, when these Indians shall know more of our system of noting time than they now do, they will devise and adopt regular *Hidatsa* names for the months of our calendar" (*Matthews*, 4).

Pawnee.—"They had no method of computing years by calendric notation. Occasionally a year that had been marked by some important event, as a failure of crops, unusual sickness, or a disastrous hunt, was referred to as *a year by itself*, but at a few years' remove even this mark became indistinct or faded altogether away. Any occurrence ten or twelve years past was usually designated as *long ago*. Their great use of the past was not as history, but simply as a storehouse of tradi-

tion, and this tendency soon enveloped the most important events with a semi-traditional glamour. When time was computed by years, it was done by winters. The year comprised alternately twelve and thirteen moons or months. . . . The intercalary month, *šsarēr'āhu*, was usually inserted at the close of the summer months. The regular months were grouped as with us by threes, the first three constituting winter (*pi'čikūt*), the second three spring (*ora'rēkaru*), the next three summer (*li'ūt*), the last three autumn (*lētskukī*). The year was also divided into two seasons (*kūt'iharu*), a warm and a cold. As may be readily anticipated, there was much confusion in their system of reckoning by moons. They sometimes became inextricably involved and were obliged to have recourse to objects about them to rectify their computations. Councils have been known to be disturbed, or even broken up, in consequence of irreconcilable differences of opinion as to the correctness of their calculations."

"As an aid to the memory, they frequently made use of notches cut in a stick or some similar device for the computation of nights (for days were counted by nights) or even of months and years. Pictographically a day or daytime was represented by a six or eight pointed star, thus, *, as a symbol of the sun. A simple cross, thus × (a star), was a symbol of a night; and a crescent, thus ☾, represented a moon or lunar month" (*Dunbar, 1*).

Dakota and Cheyenne.—"The Dakota count their years by winters (which is quite natural, as that season in their high levels and latitudes practically lasts more than six months), and say a man is so many snows old, or that so many snow seasons have passed since an occurrence. They have no division of time into weeks, and their months are absolutely lunar, only twelve, however, being designated, which receive their names upon the recurrence of some prominent physical phenomenon. For example, the period partly embraced by February is called the 'raccoon moon'; March, 'the sore eye moon;' and April, that in which the geese lay eggs. As the appearance of raccoons after hibernation, the causes inducing inflamed eyes, and oviposition by geese vary with the meteorological character of each year, and as the twelve lunations reckoned do not bring them back to the point in the season where counting commenced, there is often dispute in the Dakota tipis toward the end of winter as to the correct current date" (*Mallery, 4*).

"Some tribes have twelve named moons in the year, but many tribes have not more than six; and different bands of the same tribe, if occupying widely separated sections of the country, will have different names for the same moon. Knowing well the habits of animals, and having roamed over vast areas, they readily recognize any special moon that may be mentioned, even though their name for it may be different. One of the nomenclatures used by the Teton-Sioux and Cheyenne beginning with the moon just before winter is as follows:

1. The moon the leaves fall off.
2. The moon the buffalo cow's foetus is getting large.

3. The moon the wolves run together.
4. The moon the skin of the foetus of buffalo commences to color.
5. The moon the hair gets thick on buffalo foetus; called also "men's mouth" or "hard mouth."
6. The sore-eyed moon; buffalo cows drop their calves.
7. The moon the ducks come.
8. The moon the grass commences to get green and some roots are fit to be eaten.
9. The moon the corn is planted.
10. The moon the buffalo bulls are fat.
11. The moon the buffalo cows are in season.
12. The moon that the plums get red" (*Clark, 16*).

Klamath and Modok.—Their months "do not coincide with the months of our calendar, for they extend from one new moon to the next one, and therefore should be more properly called moons or lunations. Twelve and a half of them make up the year, and they are counted on the fingers of both hands. The first moon of their year begins on the first new moon after their return from the *wokash* harvest [about the end of August], at Klamath Marsh, which is the time when all the provisions and needful articles have been gathered in for the winter. They have now generally discarded the former method of counting moons upon fingers, and instead of it they reckon time by the seasons in which natural products are harvested (*Gatschet, 1*).

Bannock.—They distinguish the earlier moons thus: First, "running season for game;" second, "big moon;" third, "black smoke" (cold); fourth, "bare spots along the trail" (i. e., no snow in places); fifth, "little grass, or grass first comes up." They have no names for moons after the season gets warm (*Clark, 17*).





CALENDAR

THE ANKO MONTHLY CALENDAR

(August, 1889—July, 1892)

T'águñótal P'a Sän. The calendar begins about the first of August, 1889. The figure above the crescent (moon or month) is intended for the antler of a deer, in allusion to the name of this moon. No event is noted.



FIG. 193—T'águñótal P'a Sän.

T'águñótal P'a. The same symbol is used for the month. No event is recorded, because, as Anko explains, this part of his original calendar was accidentally burned.



FIG. 194—T'águñótal P'a.

Gákiñǎt'o P'a. The name means "Ten-colds moon," indicated by the ten strokes below the crescent. When this moon was one day old, a woman falsely accused of being with another man was whipped by her husband; indicated by the figure of a woman with a rod touching her head and one stroke below.

Ä'gá'nti. The first syllable of the name, *ä*, signifies a feather. Anko has therefore indicated the moon in its serial order by the figure of a feather above the crescent. No event is recorded. The three strokes show that he drew the picture on the third day of the moon.



FIG. 195 — Gákiñǎt'o P'a—Woman whipped.



FIG. 196—Ä'gá'nti.

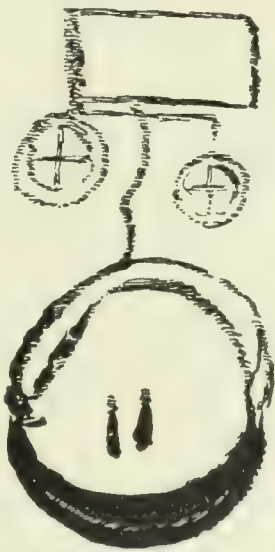


FIG. 197—T'ép g a ñ P'a—Wagon stalled.

T'ép g a ñ P'a. The name means "Geese-going moon," and the crescent lines inverted above the regular moon crescent is intended for a conventional representation of a double line of flying geese (see next figure). The rest of the picture means that his wagon was stalled on the second day of this moon.

Gañhíña P'a (January? 1890). "Real-geese moon," the name being indicated by the picture of a double line of flying geese; the single stroke and the boot record the fact that the issue of annuity goods for the year began on the first day of this moon.

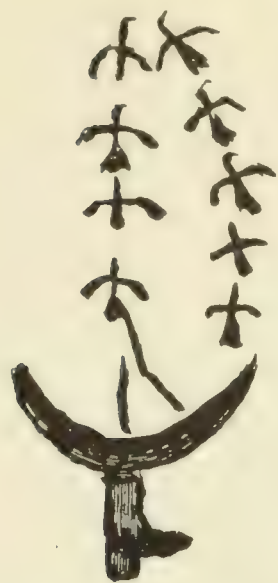


FIG. 198 — *Gañhíña P'a* — Annuity issue.

Ka'gúāt P'a Sän. The name, "Little-bud moon," is indicated by the figure of a budding tree above the crescent. The mares foal now; shown by the picture of a horse. He says the whites usually begin to plow now. It was drawn on the first day (one stroke) of the moon.

Ka'gúāt P'a, "Bud moon." Indicated by a tree with red buds.



FIG. 199 — *Ka'gúāt P'a Sän* — Mares foal.

The rude figure of an ax sticking in the tree shows that he began to split rails in this moon.

Aideñ P'a, "leaf moon." The name is indicated by the figure of a tree with green leaves. He lost his horses, hunted, and drove them home; shown by the of horses and horse tracks.

Pai Ä'gá'nti. of the moon. In Kiowa, having went and enne to learn cated by pic-crescent.

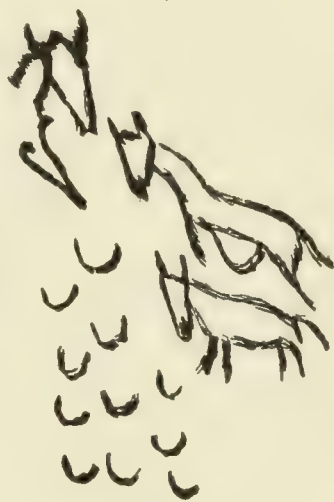


FIG. 201 — *Aideñ P'a* — Horses lost.

There is nothing to indicate the name this moon (about May, 1890) the first heard of the ghost-dance messiah, camped with the Arapaho and Cheyenne about it from them. It is indicated by the three tipis above the



FIG. 200 — *Ka'gúāt P'a* — Split rails.



FIG. 202 — *Pai Ä'gá'nti* — Visit Cheyenne.



FIG. 203 — *Pai Tépgañ P'a* — Ghost dance.

Pai Tépgañ P'a. There is nothing to indicate the name of the moon. They went again to the Cheyenne when the moon was two days old



ANKO

(two strokes) and danced the ghost dance with them for the first time. The picture shows two persons wearing the head feather and holding hands as in the ghost dance.

Pai Gañhíña P'a (July, 1890). There is nothing to indicate the name of the moon. In this moon, on July 20, 1890, the agent sent troops to prevent the sun dance, as already related (see summer 1890); there was also a payment of grass money by the cattlemen on the third day of the moon. The



FIG. 204 — *Pai Gañhíña P'a* — Sun dance stopped; Grass payment.



FIG. 205 — *T'aguñó-tal P'a Sän*.



FIG. 206 — *T'aguñó-tal P'a — Ä'piatañ*.

record is made by means of the picture of the decorated medicine pole, the three circles for dollars, and the three strokes for the time. This ends his first year of moons.

T'aguñótal P'a Sän. No event is recorded. The name of the moon is indicated by means of a figure intended to represent the antlers of a deer.

T'aguñótal P'a. The artist has tried to indicate the name of the

moon, as before, by a picture of the branching antlers of a deer, under the human figure, intended for Ä'piatañ, who went during this moon to visit the ghost dance messiah, as already narrated. (See winter 1890-91.)

Gákiñät'o P'a. The moon name is indicated as before. In this month Sitting-bull, the Arapaho apostle of the ghost dance, came to teach the doctrine to the Kiowa, and a great ghost dance was held on the



FIG. 207 — *Gákiñät'o P'a* — Sitting-bull.



FIG. 208 — *Ä'gá'nti*.

Washita; this was about October, 1890 (see winter 1890-91). The human figure beside the buffalo indicates the name "Sitting-bull."

Ä'gá'nti. The moon name is indicated as before. No event is recorded.

Tépgañ P'a (January, 1891). It is indicated in the regular way. In this moon the three schoolboys were frozen to death, as already related (winter 1890-91); they ran away from the school on January 9, 1891, and are represented by the figures as wearing hats and holding out a book. Anko drew only two figures, but explains that "everybody knows there were three."

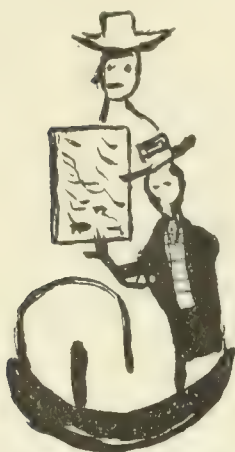


FIG. 209—Tépgañ P'a—Schoolboys frozen.

Gañhíña P'a. The moon is indicated as before. The annuity issue was made in this moon, shown by the pictures of a boot and a blanket. This was about the end of January, 1891.

Ka'gúāt P'a Sän (February, 1891). The moon is indicated in the regular way, and the rude human figure is intended by the artist for Ä'piatañ, who returned this month (February, 1891) from his visit to the Indian messiah (see winter 1890-91). The two strokes show that he returned, or that the picture was drawn, on the second day of the moon.

Ka'gúāt P'a. It is indicated as before by means of a budding tree. The agent issued wire for fencing, shown by a reel of wire upon the tree, with a single stroke for the date.

Aídeñ P'a. It is indicated as before by a tree in foliage. No event is recorded.

Pai Ä'gá'nti (June, 1891). There is nothing to indicate the name of the moon.

About this time a commission came to negotiate with the Caddo and Wichita for a sale of their reservation; an agreement was reached in June, 1891 (*Report*, 117). The figure shows a white man and an Indian beside a sectional figure to represent the allotments of lands, with circles above for the purchase money.



FIG. 213—Aídeñ P'a.

Pai Tépgañ P'a (July, 1891). There is nothing to distinguish the moon. In this moon occurs the Fourth of July, on which occasion there are always great gatherings of the



FIG. 210—Gañhíña—Annuity issue.



FIG. 212—Ka'gúāt P'a—Wire issue.

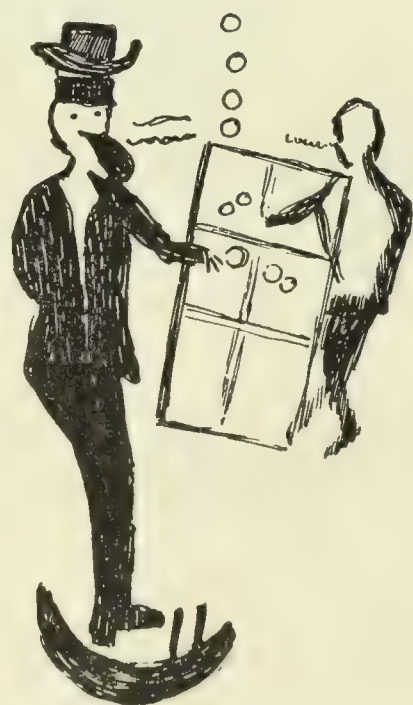


FIG. 214—Pai Ä'gá'nti—Treaty sale.

Indians for races at Fort Sill and Anadarko. Anko ran races with the rest, but lost his bet. The figure shows a quirt and a dollar, for the race and the bet.



FIG. 215—Pai Tépgañ P'a—Races.

Pai Gañhíña P'a. There is nothing to show the name of the moon. A young man “stole” the wife of Paul Sétk'opte, indicated by the picture of a woman beside a man wearing a pair of buffalo horns, Sétk'opte when a boy having been known as “Buffalo-horns.” This ends the second year of the calendar.



FIG. 216—Pai Gañhíña P'a—Woman stolen.

T'águñótal P'a Sän. The figure at the extreme top is intended for a deer antler, to indicate the name of the moon. The Kiowa enne to dance the which they obtained Pueblo Indians, and several war-bonnets dance the men carry hands, and the hind. The picture ing a war-bonnet rattle, while a *T'águñótal P'a.* The guished as before deer antler above which, although tended for a man his head; this records the killing of P'odalä'ñte, “Coming-snake,” as already related (see summer 1891).



FIG. 217—T'águñótal P'a Sän—Pueblo dance.

visited the Chey- “Pueblo dance,” originally from the received in return as presents; in this rattles in their women follow be- shows a man wear- and holding out a woman follows him. moon is distin- by a picture of a the principal figure, rudely drawn, is in- with a snake near



FIG. 218—T'águñótal P'a—P'odalä'ñte killed.

Gákiñat'o P'a. The moon is distinguished as before by the ten strokes below the crescent. In this moon T'enétaide, “Bird-chief,” alias P'ató, was sick, and they made “medicine” for his recovery, indicated by the picture of the sacred pipe; in this moon also Anko cut wood for the government, noted in the figure of a man with an ax beside a tree. The two strokes within the crescent may refer to the date either of one of the events



FIG. 219—Gákiñat'o P'a—Made medicine; Cut wood.

noted or to the day on which the picture was drawn.

Ä'gá'nti (November, 1892). The name of this moon is indicated as

before by the picture of a feather above the crescent; the crescent itself is filled in with black between the horns to note the fact of the total lunar eclipse of November 4, 1892,

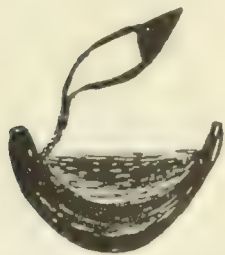


FIG. 220—Ä'gá'nti—
Lunar eclipse.

as recorded
cal Almanac.

Tépgañ P'a.
the moon is
in the first
event is re-
two strokes
the date of



FIG. 221—Tépgañ
P'a.

by the Nauti-

The name of
indicated as
instance. No
corded. The
may mark
the drawing.



FIG. 222—Gañhíña
P'a—Annuity
issue.

Gañhíña P'a. There is nothing to indicate the name of the month. The annuity issue of clothing, etc, about the beginning of the year 1892, is recorded as before by means of conventional representations of a boot and a blanket.

Ká'guát P'a Sän. The moon is distinguished as before, and the issue of wire for fencing, which occurs usually in early spring and soon after the annuity issue, is indicated as before by a reel of wire upon the tree.

Ká'guát P'a. The moon is distinguished in the regular way. In this month he removed from the winter camp near the agency to his home camp near the mountains; the tipi picture records the fact. In



FIG. 223—K'agüät
P'a Sän—Wire
issue.



FIG. 224—Ka'guát
P'a—Move camp.



FIG. 225—Á id eñ
P'a—Immigrants
arrive.



FIG. 226—Pai Ä'gá'n-
ti—Íatákia dies;
Grass payment.

the same moon came a late frost which killed the springing vegetation; the cross notes the fact, being a pictorial representation of the gesture sign for "cut off," "stopped," or "ended."

Aíden P'a (April, 1892). The moon is distinguished as before by the figure of a tree in full foliage. The picture of the wagons records the appearance of emigrants in the Cheyenne country, which was formally opened for settlement on April 19, 1892.

Pai Ä'gá'nti. There is nothing to distinguish the moon. A Ute captive named Íatákia, "Ute-man," died, and the fact is noted in the picture of a man with his hand pointing downward; in accordance with

the tribal custom, Anko for a long time refused to pronounce the name of the dead man. In this moon also began a grass payment, indicated by means of circles for dollars.

Pai Tépgañ P'a. There is nothing to distinguish the moon. He notes the great measles epidemic of the spring of 1892 (see summer 1892), and the finishing of the grass payment, by pictures respectively of a human figure with red blotches and of circles for dollars. Two strokes may indicate the date of the drawing.



FIG. 227—*Pai Tépgañ P'a*—Measles; Grass payment.



FIG. 228—*Pai Gañhíña P'a*—Fourth of July races.



FIG. 229—*T'águñótal P'a Sän*—Cheyenne dance.

The picture of a man and horse records the occurrence of the Fourth of July races.

T'águñótal P'a Sän. The moon is distinguished by the figure of a deer antler above the principal picture, which is intended to record the visit of a large party of Cheyenne and Arapaho in full dress, for dancing purposes; they arrived on July 29, 1892, and remained about two weeks.

MILITARY AND TRADING POSTS, MISSIONS, ETC, WITHIN
THE LIMITS OF THE ACCOMPANYING MAP

ARIZONA

- Apache—1870—Existing.
Barrett—May-July, 1862.
Beale's Springs—1871-1874.
Bowie—1862-1894.
Breckenridge—1860-1862.
Buchanan—1856-1861.
Cameron, Camp—1866-1867.
Crittenden—1868-1873.
Date Creek, Camp—1867-1873.
Defiance (now Navaho Agency)—1852-1861.
Ganado, or Pueblo Colorado (trading place of Cotton & Hubbell)—
Existing.
Goodwin, Camp—1864-1871.
Grant, Camp (old)—1865-1872.
Grant—1872—Existing.
Huachuca—1877—Existing.
Hualpai, Camp—1869-1873.
Keam's (trading place)—1869—Existing.
Lowell—1862-1891.
McDowell—1865-1891.
Mason—1865-1866.
Mohave—1859-1890.
Pinal, Camp—1870-1871.
Rawlings, Camp—1870.
Reno, Camp—1867-1870.
Round Rock (trading place)—
Rucker, Camp J. A.—1878-1880.
San Carlos (subpost of Fort Grant)—1882—Existing.
San Xavier del Bac Mission (Catholic)—Church erected, 1699; mis-
sion abandoned, 1750; reoccupied, 1752; practically abandoned as a
mission, 1828.
Supply, Camp (old)—
Thomas—1876-1892.
Tubac (presidio and mission)—1752; presidio transferred to Tucson,
1772; reestablished, 1824, but evidently abandoned as presidio and
mission shortly afterward.
Tucson—Visita of San Xavier about 1772, when presidio was trans-
ferred from Tubac; abolished as a presidio at beginning of Mexican
war.

Tumacacori Mission (Catholic)—Established between 1699 and 1701; practically destroyed by Apaches, 1769; reoccupied about 1784; destroyed again by Apaches, 1820.

Verde—1866–1891.

Wallen, Camp—1866–1869.

Whipple—1864–1898.

Whipple, Camp (old)—1863–1864.

Willow Grove, Camp—1867–1869.

ARKANSAS

Smith—1817–1871.

CALIFORNIA

Yuma—1850–1883.

COLORADO

Bent's (old)—1834–1867: Originally established as a trading post by Charles Bent and Ceran St Vrain in 1834, sometimes known as Fort William. In 1860 it was occupied by the United States as a part of the new Fort Wise, established adjoining in that summer, and sometimes known as Old Fort Lyon. In 1867 Fort Wise was abandoned and (New) Fort Lyon established, the buildings of Bent's Fort being then in ruins.

Bent's (new)—1852–1853.

Collins—1864–1866.

Crawford—1880–1890.

Garland, or Massachusetts—1850–1883.

Lewis—1878.

Logan—1889—Existing.

Lupton—

Lyon (new)—1867–1889.

Morgan—1865–1868.

Pike's Blockhouse—1806.

Pike's Fort—1807.

Reynolds—1867–1872.

Sedgwick—1864–1871.

St Vrain's, trading post of Bent and St Vrain—1826–1847.

White River, Camp on—1891.

William—*see* Bent's (old).

Wise, or Old Fort Lyon—1860–1867—*see* Bent's (old).

IDAHO

Boisé (Hudson Bay Company and United States)—United States, 1863—Existing.

Cœur d'Alène or Sherman—1878—Existing.

Hall (Hudson Bay Company and United States—before 1844)—1883.

Henry's (Missouri Fur Company)—1809–1811.

Lapwai—1862-1885.

Lyon, Camp—1865.

Sacred Heart Mission (Catholic)—1842—Existing.

Sherman—*see* Cœur d'Alène.

Winthrop, Camp—1866.

INDIAN TERRITORY AND OKLAHOMA

Arbuckle, Camp (on Canadian)—1850-1851.

Arbuckle, Fort (new—near Washita)—1851-1870.

Arbuckle Fort (old—on Arkansas)—June-November, 1834.

Augur, Camp—1884 (summer).

Cantonment—1879—Existing.

Chouteau's—Camp Holmes, of treaty conference in 1835; Chouteau's trading post 1835-38.

Cobb—1859-1869.

Coffee—1834-1838.

Gibson—Trading post 1822; United States 1824.

Holmes, Camp—*see* Chouteau's.

Holmes, Fort—

McCulloch—

Madison's—*see* "Tométe's."

Radziminski, Camp—1858-1859.

Reno—1874—Existing.

Sill—1869—Existing.

Supply—1868-1894.

"Tométe's"—Trading post established in 1836; same site occupied by Madison in 1869.

Towson—1824-1854.

Washita—1842-1861.

Wayne—1838-1842.

IOWA

Dodge, or Clarke—1850-1853.

KANSAS

Atkinson—1850-1854.

Beecher, Camp—1868-1869.

Chouteau's—1845.

Dodge—1865-1882.

Harker (at Ellsworth)—1864-1873.

Hays—1865-1889.

Larned—1859-1878.

Leavenworth—1827—Existing.

Lincoln—1863-1864.

Mann—trading post, marked on map of 1846.

Riley—1853—Existing.

Scott—1842-1865.

Wallace—1865-1882.

Zarah—1864-1869.

MINNESOTA

Ridgely—1853-1867.

Ripley—1849-1877.

MISSOURI

Carondelet (Chouteau's)—1790.

Osage—1809-1835.

MONTANA

Alexander (American Fur Company)—1842.

Assinniboine—1879—Existing.

Belknap—

Benton (American Fur Company and United States)—United States, 1869-1881.

Browning—

Canby, Camp—

Charles—

Clagett—

Cook, Camp—1866-1870.

Custer—1877—Existing.

Ellis—1867-1886.

Galpin—

Gilbert—

Harrison—1895 (September)—Existing.

Hawley—

Keogh—1877—Existing.

Kipp—

La Barge—1862.

Lewis, Camp—1874.

Lisa's (Missouri Fur Company), *a.* 1808-9; *b.* 1807-8, later site of Fort Van Buren.

Logan—1869-1880.

Maginnis (on Box Elder creek)—1890.

McGinnis (on Birch creek) —

McIntosh, Camp—

Merritt, Camp (subpost of Fort Keogh)—1892 (October)—Existing.

Missoula—1877-1898.

Owen (trading)—*see* St. Mary's Mission.

Pease—1875-1876.

Peck—

Poplar River, Camp—1882-1893.

Saint Ignatius Mission (Catholic)—1851.

Saint Mary's Mission (Catholic)—1841-1850, then changed to trading post, Fort Owen.

Saint Peter's Mission (Catholic)—

Sarpy (America Fur Company)—1850.

Shaw—1867-1891.

Smith, C. F.—1866-1868.

Stewart—

Turnay—

Union—American Fur Company, 1832; United States, 1867.

Van Buren or Tullock (American Fur Company)—1839-1841; *see* Lisa's.

NEBRASKA

Atkinson, or Calhoun—1821-1827.

Bellevue (Missouri Fur Company; American Fur Company; agency; mission)—1805-1854.

Crook—1896 (June)—Existing.

Hartsuff—1874-1881.

Kearney (old)—1847-1848.

Kearney (new)—1848-1871.

McPherson—1863-1866.

Niobrara—1880—Existing.

North Platte station—1867-1878.

Omaha—1868-1896.

Red Willow, Camp—1872.

Robinson—1874—Existing.

Ruggles, Camp—1874.

Sheridan, Camp—1874-1881.

Sidney—1867-1894.

NEVADA

Halleck—1877-1886.

Ruby, Camp—1862-1869.

NEW MEXICO

Albuquerque, Post—1846-1867.

Bascom—1863-1870.

Bayard—1866—Existing.

Burgwin, Cantonment—1852-1860.

Conrad—1851-1854.

Craig—1854-1885.

Cimarron or Maxwell's Ranch, trading post, established about 1848; occupied as Ute and Jicarilla agency, 1861-1872.

Cummings—1863-1886.

Defiance—*see* under Arizona.

Fillmore—1851-1861.

Las Cruces—1863-1865.

Las Lunas—1852-1862.

Los Pinos—1862-1866.

Lowell—1866-1869.

Lyon—*see* Wingate.

McLane—1860-1861.

McRae—1863-1876.

Marcy—1846-1897.

Mimbres—

Selden—1865-1891.

Stanton—1856-1896.

Sumner—1862-1869.

Thorn—1853-1859.

Tularosa—1872-1874.

Union—1851-1891.

West—1863-1864.

Wingate (old)—1862-1868.

Wingate—Fort Lyon 1860-1861; Wingate 1868—Existing.

NORTH DAKOTA

Abercrombie—1858-1878.

Bad Lands, Camp—1879-1883.

Berthold—American Fur Company, 1845-1862; United States, 1865-1867.

Buford—1866-1895.

Clark—

Lincoln, A.—1872-1891.

Mandan—Lewis and Clark, winter 1804-05.

Pembina—1870-1895.

Ransom—1867-1872.

Rice—1864-1878.

Seward—abandoned 1877.

Standing Rock Agency (at Fort Yates)—1874—Existing.

Stevenson—1867-1883.

Totten—1867-1890.

Yates—1878—Existing.

SOUTH DAKOTA

Bennett (Cheyenne River Agency)—1870-1891.

Dakota—1865-1869.

George—

Hale—1870-1884.

James—1865-1866.

Lookout—trading post; United States, 1856-1867.

Meade—1878—Existing.

Pierre—American Fur Company, 1819; United States, 1865-1867.

Ponca—1865-1866.

Randall—1856-1892.

Sisseton—1864-1889.

Sully—1866-1894.

Sully (old)—1863-1866.

Thompson (Crow Creek agency)—1864-1867.

TEXAS

- Anderson's, trading post—
Barnard's, trading post—
Belknap—1851-1867.
Bliss—1848—Existing.
Brown—1846—Existing.
Chadbourne—1852-1867.
Charlotte, Camp—
Clark—1852—Existing.
Colorado, Camp—1856-1861.
Concho—1867-1889.
Cooper, Camp—1856-1861.
Davis—1854-1891.
Del Rio, Camp—1876-1891.
Duncan (afterward Eagle Pass)—1849-1883.
Eagle Pass (subpost of Fort Clark)—1883—Existing.
Elliott—1875-1890.
Esperanza (Confederate)—1862-1864.
Espiritu Santo Mission (Catholic)—
Ewell—1852-1854.
Gates—1849-1852.
Graham—1849-1853.
Griffin—1867-1881.
Hancock—1884-1895.
Hudson, Camp—1857-1868.
Inge—1849-1869.
Lancaster, Camp—1856-1861.
Leaton—1846— ——.
McIntosh—1849—Existing.
McKavett—1852-1883.
Martin Scott—1848-1866.
Mason—1851-1869.
Merrill—1850-1855.
Parker's—1835.
Peña Colorado—1892.
Phantom Hill—1851-1854.
Polk—1846-1850.
Quitman—1858-1877.
Richardson—1867-1878.
Ringgold—1848—Existing.
San Houston (formerly Fort San Antonio, at San Antonio)—1845—
Existing.
San Rosario Mission (Catholic)—
San Saba, Camp—1851.
Scott, Camp M. J.—1854.

Sherman—(in 1856.)
Stockton—1859–1886.
Terret—1852–1854.
Torrey's, trading post (in 1843.)
Verde, Camp—1856–1869.
Wood, Camp—1857–1861.
Worth—1849–1853.

UTAH

Cameron—1872–1885.
Douglas—1862—Existing.
Du Chesne—1886—Existing.
Thornburgh—1882–1883.
Uintah (trading post)—before 1844.

WASHINGTON

Colville (Hudson Bay Company)—1820–1864.
Okinakane (Hudson Bay Company)—1811–1862.
Saint Ignatius Mission (Catholic)—1844.
Spokane—1880—Existing.
Waiilatpu (Protestant, at Whitman)—1838.

WYOMING

Augur, Camp—*see* Washakie.
Bonneville—
Bridger—American Fur Company, about 1820; United States, 1842–1890.
Brown, Camp—*see* Washakie.
Casper—1863–1867.
Fetterman—1867–1882.
Halleck—1862–1866.
Kearney—1866–1868.
Laramie—American Fur Company, 1834; United States, 1849–1890.
McKinney—1877–1894.
Pilot Butte, Camp (subpost of Fort Russell)—1885 (October)—Existing.
Russell—1867—Existing.
Sanders—1866–1882.
Stambaugh, Camp—1870–1878.
Steel—1868–1883.
Washakie, or Camp Brown (Shoshoni and Arapaho agency). Established as Camp Augur, later called Camp Brown, finally Fort Washakie—1869—Existing.
Yellowstone—1883—Existing.

THE KIOWA LANGUAGE

CHARACTERISTICS

So far as at present known, the Kiowa language has no affinity with any other, but it is possible that closer study and more abundant material will establish its connection with some one of the linguistic stocks on the headwaters of the Missouri and the Columbia, the region from which the tribe has migrated to the south. All of the language that has hitherto been printed is comprised in a list of one hundred and eighty words collected by Bartlett in 1852 ("Personal Narrative," 1854), and in fifteen songs of the ghost dance, published by the author in 1896 in the Fourteenth Annual Report of the Bureau of Ethnology. To these may be added a few words and sentences printed in phonetic type in a little paper called "The Glorious Sun," published at irregular intervals in 1895 at Anadarko by Lewis D. Hadley. There is also in possession of the Bureau an extended manuscript vocabulary with texts collected on the reservation by Albert S. Gatschet in 1880.

Although the Kiowa language is really vocalic, nearly every syllable ending in a vowel and there being but few double consonants, yet the frequency of the explosive or aspirated sounds renders it unpleasing to the ear and unfitted for melodious musical composition, such as we find in the Arapaho and Caddo songs. It has, however, a forcible effect in oratory on account of the strong distinct enunciation of nearly every vowel and syllable, the vigor of the gutturals and dentals, and the redundancy of the sonorous *o*. The distinct emphasis put upon nearly every syllable gives to sentences the effect of a chant or recitation, while the frequent rising inflection lends a querulous tone to an ordinary conversation.

The language lacks *f*, *v*, and *r*. In attempting to pronounce English words, *p*, *b*, and *l* are substituted, respectively, for these sounds, while *ch* is changed to *ts*. The diphthong *au* is also wanting, and short *û* occurs only in a few words of foreign origin. With the exception of *ă* short or obscure, the vowels are generally long. *D* has a slight explosive sound and approximates *t*. Before *l* it is softened or sometimes even entirely elided, the vowel being lengthened to supply the hiatus. Thus in Bartlett's vocabulary we find *ol*, *k'ul*, and *kol* for *âdal*, *k'odal*, and *gadal*. The same change is made by the Kiowa in pronouncing English words of like character, as *săl* for *saddle*. The most common vowel sounds are *a*, *ä*, *e*, and *o*; *â* with certain speakers becomes *o*, and *e* is weakened to *i*. Nasal vowels are frequent. There are several aspirated or medial sounds and a strong explosive *k'*. Below is given the list of sounds according to the Bureau system, nasals being indicated by *ñ*. A frequent rising inflection at the end of words, repre-

sented by some authors by means of a final *h*, is here indicated by the accent '.

Like all other living languages, the Kiowa is undergoing a process of gradual change, and many archaic forms and expressions are used by the old men, particularly in reciting myths, which are unknown or difficult of interpretation by the younger people. The same fact has been noted among other tribes (*Matthews*, 5). The changes are more rapid in Kiowa on account of the tribal custom, already mentioned, of substituting new words for any which suggest the name of a person recently deceased. Even such common words as *dog*, *bird*, and *moccasin* have thus been entirely changed within a few years, and some old men remember as many as three different words used at different periods for the same object. As this process has been going on for an indefinite length of time, it of course adds difficulties to the work of investigating the linguistic affinities of the language. In most, if not all cases, however, the new word is not an actual new creation, but a new combination of old root forms.

In most tribes we find the priests using in their ceremonial rites a peculiar dialect, full of archaic forms and figurative expressions unintelligible to the common people. This is probably true also of the Kiowa.

Traces of dialectic forms appear in the language, and from this fact and from statements of the old people, it is probable that some at least of the six recognized Kiowa tribal divisions previously described, were originally distinct, but cognate and allied, tribes, speaking different dialects. The extinct K'ũto particularly are said to have spoken the language in a peculiar manner.

A few words from other Indian languages, occurring in the text, are also included in the glossary. Corrupted popular forms of Indian words are printed in capital letters.

Sounds

a (long)— <i>pa</i> , buffalo bull.	d (evanescent)— <i>ádal</i> , hair.
ă (short or obscure)— <i>guăť</i> , picture.	g (sometimes approaching the sound of <i>k</i>)— <i>go</i> , and; <i>gadal</i> , buffalo.
â (deep, varying to <i>o</i>)— <i>ádal</i> , hair.	h— <i>ho'an</i> , road, trail.
ä (German ä)— <i>tügyĩ</i> , wild sage.	k— <i>kop</i> , pain.
e (long, varying to <i>i</i>)— <i>pe</i> , sand.	k' (explosive)— <i>k'op</i> , mountain.
i (long)— <i>piă</i> , fire.	l— <i>ălo'</i> , wild plum.
ĩ (short) not frequent.	m— <i>mă'să'</i> , six.
o (long; sometimes substituted for <i>â</i> or <i>ă'</i> accented)— <i>po</i> , trap.	n— <i>onhă'te</i> , bear.
u (long)— <i>gu'ădal</i> , red.	p— <i>po</i> , trap.
ũ (short) not common.	p' (aspirated)— <i>p'o</i> , beaver.
û (not common, only in foreign words)— <i>Pă'súñko</i> , Paseños of El Paso.	s (there is no <i>sh</i>)— <i>sen</i> , nostril.
ai— <i>pai</i> , sun.	t— <i>tem</i> , bone.
ñ (nasalized vowel)— <i>tseñ</i> , horse.	t' (aspirate)— <i>t'a</i> , ear; <i>t'aiñ</i> , white.
b— <i>bot</i> , stomach.	w (very rare)— <i>Woháte</i> , a personal name.
d (slightly explosive)— <i>do'</i> , tipi; <i>doha</i> , bluff.	y— <i>yi'a</i> , two.
	z— <i>ze'bat</i> , arrow.

KIOWA-ENGLISH GLOSSARY

a — a game; *do'-a'*, *tso'ñ-a'*, etc.

ä — (1) feathers; singular, *ägo*, in composition, *ä-*; (2) trees, bushes, timber, wood, plants; singular *ä'do*, in composition *ä-*. *Pep*, literally “bush,” is now frequently used on account of the recent death of a person in whose name *ädo* occurs as a component.

ää' — I come or approach; I came, *ätsä'n*; he or they came (sometimes used for return), *tsän*; come (imp. sing.) *imä'*.

Ä'anoñ'te — see *Doha'sän* (2).

ä'-ä'oto'n — a timber clearing; from *ä* and *ä'oto'n*, q. v.

Ä'bä'dlo' — “timber hill, or ridge” from *ä* and *bä'dlo'*, q. v.; a bluff or hill closing in upon the bottom on the south side of the Washita at the Kiowa winter camp, 4 miles above the agency.

Ä'büho'ko — Navaho; the old name, derived from the word Navaho; now more frequently called *Kotse'nto*, “muddy bodies” (*tse'n*, mud), from an alleged custom of painting themselves with clay. SIGN (1) “Mountain people,” same as for the Ute (see *I'ältä'go*); (2) “Knife-whetters,” same as for Apache (see *Tagu'i*).

abiñ' — tripe; the principal stomach of the buffalo or cow.

a'da' — island.

ä'cal — hair; *ä'daltem* (literally, hair bone), head, in composition sometimes *ädal-*.

Ä'dalbea'hya — the eucharistic “medicine” of the Kiowa, derived from the Sun-boy; sometimes called the *Tä'lyi-da'-i*, “Boy medicine,” (page 238). The name refers in some way to the scalps with which it is covered, from *ä'dal*, hair.

ä'däldä — repeated (said of a ceremony), and hence might also be rendered “united” or “union,” as applied to two ceremonies near together; *gi'ä'däldä-a'mo*, they will repeat the ceremony; *gi'ä'däldäa'mi*, they have repeated the ceremony. The common word for often, or repetition, is *a'pa'*, as *a'pa'gyäda'mo*, I am repeating or have repeated it, I have done it several times or often.

ä'dalda-gu'än — the scalp dance; literally “hair-kill dance,” from *ädal*, *dä*, and *gu'än*, q. v.; scalp (noun), *ä'tä't* (see Winter 1849-50).

ä'dalhabä' — “sloping or one-sided hair,” from *ä'dal* and *habä'*, q. v.; a style of hair dress in which the hair upon the right side of the head is shaved close so as to display the ear pendants, while left full length on the left side.

Ä'dalhabä'-k'ia — “Ä'dalhabä'-man,” a noted Kiowa chief killed in Texas in 1841 (see Winter 1841-42). The name refers to his peculiar hairdress, from *ädalhabä'* and *k'ia*, q. v.

ädalhân'gya — money; literally “hair metal,” from *ä'dal* and *hâ'n'gya*, q. v. (for explanation of name, see Winter 1832-33); softened to *ä'lhân'gya* or *o'lhoñ'gya*. Cf. *go'm-ä'dal-hâ'n'gya*.

ä'dalka'-i — foolish, crazy (temporarily); from *ä'dal-*, head, in composition. Harmlessly demented, *ä'dalka'-idä'*; stupid, *ä'dalka'yom*; he has become crazy, *ä'dalka'yom-dehe'dal*.

Ä'dalka' i do'ha' — “crazy bluff;” a bluff on the south side of Bear creek, near its head, between Cimarron and Arkansas rivers, near the western Kansas line. So called on account of a rejoicing there over a Caddo scalp (see Winter 1860-61).

ä'dalka'-igihä — a crest or topknot, from *ä'dal* and *ka'-igihä'*, q. v. The kingfisher is called *ädalka'-igihä'*, on account of his topknot.

Ä'dalk'ato'i-go — Nez Percés; “people with hair cut round across the forehead,” from *ä'dal*, *k'ato'i*, and *-go*, q. v. Identified by means of a picture of Chief Joseph. SIGN: Right forefinger drawn around across forehead.

Ä'dalpe'pte — “bushy hair,” an old Kiowa warrior, commonly known as Frizzle-head; from *ä'dal*, *pep*, and *te*, q. v. *Ädalpep* is also the name of a specific variety of bush.

Ä'daltädo — see *K'apä'to*.

ä'daltem — head or skull, literally “hair bone,” from *ä'dal* and *tem*, q. v. In composition it becomes *ädal-* or *ä'daltoñ*, the latter being the plural form.

Ä'daltem-etku'egan-de p'a — “head-dragging creek,” from *ä'daltem*, *etku'egan*, *-de*, and *p'a*, q. v.; a small tributary of Clear fork of the Brazos (*Äse'se p'a*) in Texas (see Winter 1837-38).

âdaltoñ—heads, plural form of *âdaltem*, q. v. The plural form is commonly used in the composition of proper names, as *âdaltoñ-cdal*, “Big-head;” *Sapo’dal-adaltoñ p’a*, “Owl-head creek.” This pluralizing of proper-name forms is common also in other Indian languages.

Âdaltoñ - â’dalka’ - igihä’go — Ponka; “Crested-head people,” on account of their peculiar headdress, consisting of a ridge of erect hair along the top of the head from front to back, like the crest of an ancient helmet; from *â’daltoñ*, *â’dalka’-igihä’*, and *go*, q. v. Cf. *Â’daltoñ-ka’-igihä’go*.

Â’daltoñ-e’dal—“Big-head,” from *â’daltoñ* and *edal*, q. v.; (1) a prominent Kiowa warrior who died in the winter of 1863-64; (2) a chief still living, nephew and namesake of the other, commonly known as Comalty, from his former name *Gomä’te*, which can not be translated.

Â’daltoñ-ka’-igihä’go—Flatheads, literally “compressed head people,” from *â’daltoñ*, *ka’-igihä’*, and *go*, q. v. They are sometimes also called *Â’daltoñ-k’iägo*, “Head people.” The Kiowa indicate them in the sign language by a gesture as if compressing the head between the hands. Cf. *Â’daltoñ-â’dalka’-igihä’go*.

Â’daltoñ-k’i’ügo—See the preceding.

âdalto’yi—wild sheep; plural *âdalto’yui*; the name refers to their going in droves or herds; also called *teñbe*, plural *te’ñbeyu’i*.

Ä’dalto’yui—“Wild Sheep,” one of the six military orders of the Kiowa (see 142), from *âdalto’yi*, q. v. They are also called *Teñ’beyu’i*, from *teñ’be*, another name for the same animal.

Ä’däm—the Kiowa name of agent Charles E. Adams (1889-1891); a corruption of his proper name.

Ä’da’n—“Timber pass,” locative *Ä’da’n-gyă*, from *ä*, *dan*, and *gyă*, q. v.; the valley along *Ä’da’n p’a*, q. v.

Ä’da’n p’a—“Timber-pass creek,” from *ä*, *dan*, and *p’a*, q. v.; a creek north of Mount Scott, flowing south into Medicine-bluff creek, on the reservation. *Se’t-ïmki’a*, *Gaa’piatañ*, and other prominent Kiowa live upon it.

A’da’te—“Island,” from *a’da’*, q. v.; head chief of the Kiowa in 1833, superseded by the great Dohasän.

ADDO ETA—see *Ä’do-ee’tte*.

ä’de—an idol or amulet carried on the person. Cf. *Ä’dek’i’a*.

Ä’dek’i’a—“Idol-man,” from *ä’de* and *k’i’a*, q. v.; a Kiowa warrior, so called because he always carried an unknown *ä’de* in a pouch slung from his shoulder.

Ä’dek’i’a-de p’a—Buck or Clear creek, which enters Red river at the corner of the reservation; literally “Ä’dek’i’a’s river” (see the preceding), because he died there.

ä’do or ädä’—tree, shrub, timber; plural *ä*, q. v.

Ädo’ä p’a—Mule creek, between Medicine-lodge creek and Salt fork of the Arkansas, Oklahoma; literally “timber wind-break creek,” from *ä* and *doä*, q. v.; so called from a circular opening in the timber, resembling a wind-break. Another informant says it was so called because frequented by the Pawnee, who used always to build such wind-breaks about their camps.

ä’do-byu’ñi—a circular opening in timber; from *ä’do* and *byu’ñi*, q. v.

Ä’do-ee’tä-de p’a—Valley creek (?); a northern tributary of Elm fork in Greer county, Oklahoma; the *Ataway-taiti Pau* of the map in U. S. Sup. Ct., Greer county case, I, 652; literally “big tree creek,” from *ädo*, *ee’t*, *-de*, and *p’a*. So called on account of a large cottonwood formerly growing on its east bank, which required seven men to span it. It was afterward cut down by Mexicans. The form is plural. Cf. *Ä’gi’äni p’a*. It was also known as *Tseñtän p’a*, from the *Tseñtänmo* military order.

Ä’do-ee’tte—“Big-tree,” from *ä’do*, *ee’t* or *e’däl*, and *te*; a prominent Kiowa chief, still living; spelled *Addo Eta* by Battey.

Ä’do’mko—“people under the trees, timber people,” from *ä*, *dom*, and *ko*; a collective term for the immigrant tribes from the gulf states, now in Indian Territory, the Cherokee, Creek, Choctaw, Chickasaw, Seminole, and Caddo. Individual tribes are known also by special names, as *Tsë’roki* (Cherokee), *Masko’ki* (Creek), *Ma’sep’* (Caddo).

A-EI-KENDA (Apache)—“The One who is Surrendered;” the name with rendering as given in the treaty, of a Kiowa Apache chief who signed the treaty of 1837.

A'ga'bai'—“On-top-of-the-hill; a Kiowa woman killed by her husband in 1876-77.

Ä'g'a'do—“wailing sun dance,” from *a'gyä* and *g'ado*. The sun dance of 1837, so called on account of the wailing for warriors killed by the Cheyenne.

ä'ga'-i—a species of hawk.

Ä'ga'-i p'a—(1) “hawk creek;” the east fork of Elk creek on the reservation; (2) an upper branch of White river, of the Brazos, Texas.

ä'ga'n—see *gyä'gan*.

Ä'gä'nti—a moon or month including parts of October and November, from *ä'gä'ntsän*, q. v. Sometimes also called *Ä'gäntsä'nha*, or *Sä-kop p'a*, “midwinter moon,” from *sä-kop* and *p'a*. (See page 368.)

ä'gä'ntsän—an irregular verb about equivalent to “I am coming soon,” or “wait until I come.” *Hi'tugü' ä'gä'ntsän*, “wait and I'll go.”

Ä'gä'ntsä'nha—see *Ä'gä'nti*.

a'gat—pimple.

a'gat-ho'dal—measles, “pimple sickness,” from *a'gat* and *ho'dal*.

Ä'gi'äni p'a—the middle fork of Elk creek of Red river, on the reservation; “long, or tall, tree creek,” from *ä*, *g'iäni* and *p'a*; so called on account of a very large tree formerly upon it. Cf. *Ä'do-ee'tä-de p'a*. Marcy in 1852 notes large cottonwoods on the South Canadian about 101°, one being 19½ feet in circumference 5 feet from the ground.

Ä'go'tä—chinaberry tree or *palo duro*; “hard wood tree,” from *ä*, *got*, and *ä*.

Ä'go'tä p'a—“Chinaberry creek;” *Palo-duro* creek, in the panhandle of Texas.

Ägu'at—see *Sä'k'ota*.

Ägun'tä p'a—Washita river; “tipi-pole timber river,” from *ä*, *guntä*, and *p'a*.

a'gyä—lamentation, wailing, crying; a loud, general, and continuous wailing, as for the dead. It has no verbal form. Crying (n.), *a'lyi*; I cry, *äa'lyi*.

Ä'gya'i'ko—Penätë'ka Comanche; “timber Comanche,” from *ä* and *Gya'ko*. Their Comanche name, Penätë'ka or Penätë'ka, signifies “honey eaters.”

äha'gyä—they took it (a quantity or number, as of cattle or money, either by trade or force). The verb has no present. *gyäha'gyä*; I have taken it (animate object or money); *gyäta'gyä*, I have taken it (inanimate object).

ahi'n—cedar; “conspicuous,” “peculiar,” on account of its green appearance in winter; said also of a pinto horse, a finely dressed chief, etc. Cf. *ä'hi'n*, “principal tree,” i. e., the cottonwood.

Ahi'n do'ha—“cedar bluff,” from *ahi'n* and *doha*; a bluff on the north side of Smoky-hill river, about opposite the mouth of Timber creek, near Fort Hays, Kansas.

Ahi'ña toñ—“cedar spring,” from *ahi'n* and *toñtep*; a water hole on the Staked plain in Texas or New Mexico.

AH-PE-AH-TONE—see *Ä'piatañ*.

AH-TE-ES-TA—see *Ä'te'stisti*.

Ä'hyäto—Southern Arapaho; plural, *Ä'hyädal*. The name can not be interpreted or explained by the Kiowa, but is the same name applied to the wild plum bush; the first syllable, *ä*, may mean tree, bush, or timber. The Kiowa formerly called the Southern Arapaho *Komse'ka-k'i'nähyu'p*, “men of the worn-out leggings,” from *komse'*, *ka'ti*, and *k'i'nähi*. T'ebodal, the oldest man in the tribe, says that the name *Ä'hyäto* was formerly applied to the Osage (see *K'apä'to*), but was changed on account of a death and revived for another tribe. The Kiowa called the Northern Arapaho of Wyoming *Tägyä'ko*, “wild sage people” (from *tä'gyä* and *ko* or *k'äko*), and the Arapaho Grosventres, living with the Blackfeet, they call *Botk'i'ägo*, “belly people” (from *bot* and *k'i'ägo*).

ai'deñ—leaves, foliage

Aideñ P'a—a moon or month including parts of March and April; “leaf or foliage moon,” from *ai'deñ* and *p'a*.

A'ideñ-gyägu'ädal-om'gyä-i—see *Pao'n-gya*.

Ai'koñ p'a—“dark-timber, i. e., shady, river,” from *ä*, *koñ* and *p'a*; (1) Pawnee fork of Arkansas river in Kansas, also called *Mä'nka-gu'ädal-de p'a*, from a Comanche chief named *Mä'nka-gu'ädal*, q. v., who was killed there; (2) Boggy creek, tributary of the South Canadian, on the Wichita reservation, sometimes

called *Gi'atä P'ada'li*, "ridge creek, or backbone creek," from *gi'apa'-iñgya*, on account of a high ridge which separates it from the South Canadian (see also *Aikoñ tsen p'a*).

Ai'koñ P'a Sole'go or *Ai'koñ P'a Yä'pähe'gyä*—Fort Larned, Kansas, established in 1859 on the south bank of Pawnee fork, 8 miles above its junction with the Arkansas. It was the issue point for the southern plains tribes until their removal to Indian Territory. The name signifies "soldier place on Dark-timber river," from *Aikoñ p'a*, *sole'go* or *yä'pähe'*, and *gyä*. Also called *Mänka-gu'ädal-de P'agya*, *Yä'pähe gi'ädal-de'e*, q. v.

A'ikoñ tsen p'a—Lebos creek, Greer county, Oklahoma; "dark timber mud creek," or "muddy dark-timber creek," from *Aikoñ p'a* and *tsen*. Sometimes called simply *Aikoñ p'a*.

ak'a'—rough, notched, serrated.

äk'a'—I am lying down; he is lying down, *k'a*. Cf. *k'a*, knife.

aka'-i—wrinkled.

akan(-gya)—last (of a series); at the end; in composition *aka'n*.

äko'ä—I spy.

Äk'o'dalte—"Feather-necklace," a Kiowa warrior and shield maker (see Winter 1853-54). Abbreviated from *Äk'o'dalpä'te*, from *ä*, *k'o'dalpä*, and *te*.

Ä'läho'—Quapaw? Omaha? Described as a tribe living north from the Osage, and with the same language and style of shaving the head. *Gaa'piatañ*, who knows the name of the Quapaw, says they are the *Äläho'*. The name occurs in the early French narratives, as *Anahou*, *Anahon*, *Anahous*, and *Anaho*, described as the Osage or a part of them (Joutel, 1687; La Harpe, 1719; Bienville (?), 1719; in Margry, VI). Dorsey stated that the Osage, Quapaw, and Kaw speak one dialect, and the Omaha and Ponka another dialect, of the same language. The name has no meaning to the Kiowa, who say that it is the name used by the *Äläho'* themselves. It can hardly be intended for the Omaha, whom the Kiowa call *O'moho'ñko*.

älo'—plural *älä'go*, the wild plum; *t'äb-älo'*, "antelope plum," a smaller bush variety; *señ-älo'*, "prickly *älo'*," the prickly pear; *pa'gi-älo'*, "downy *älo'*,"

peach; *älo-sáhe'*, "green *älo'*," apple; *älo'-gu'ak'o*, "yellow *älo'*," orange; *älo'-koñ'kya*, "black *älo'*," prune.

ân, *âmo*—the root of the verb to do, to make; I make it (generic), *gyädä'mo*; I make it (dress, arrow, etc), *gyätä'mo*; I make butter, etc, *giä'mo*.

an—a track.

änä'obahe'ma—we must die (from *Kâitse'ñko* song). Cf. *hem*.

Ä'ndali—for "Andres;" Andres Martinez, an influential Mexican captive among the Kiowa and delegate in 1894 (see Winter 1866-67).

añga'dal—beyond, more.

Añga'-ite'—"Ankle," a Mexican captive and Florida prisoner in 1875. There is no real word for ankle, which is described as "foot joint," etc.

Ango'pte—see *T'ene'-ango'pte*.

äñgya—sitting; *ääñgya*, I sit; *ä'ñgya*, he sits.

A'ñko' or *A'ñkopa'-iñgyade'te*—"In-the-middle-of-many-tracks," from *an*, *kopa'-iñgya*, *de*, and *te*. A Kiowa warrior, author of two of the calendars, commonly abbreviated to *Anko'*.

anso', *anso'i*—foot.

A'nso-gi'äni or *Anso'te*—"Long-foot," from *anso'*, *gi'äni*, and *te*; a noted priest of the *taime*, who held it for forty years, from before 1833 until his death in the winter of 1870-71. Commonly abbreviated to *Anso'te*.

ä'ntsenku'ädal—"he (she) built a nest there," literally, "he put clay (?) there;" a bird's nest is called *tsen*, which also is the word for "mud," possibly because some birds build nests of clay; *tsengiä'mo guato*, "the bird is building a nest." A bird's nest is also called *gu'äto-do'*, "bird house."

äo'päñ—he was initiated into the *Kâ'itseñko*, q. v.; I am, etc, *äo'päñ*; they were initiated, etc, *edo'päñ*; to initiate into the *Kâ'itseñko*, *äo'pä*, from verb *äo'pä*, "to tie with a rope around the neck" (see Summer 1846). I tie it, *gyä-pä'imo*; I tie him with a rope around his neck (not necessarily to choke him), *gyäo'pä*; I choke him with my hand, *gyäo'de*.

ä'oto'n—they were massacred, exterminated, or annihilated; also to clear off, as timber; I exterminate them, *de'oton*; we shall exterminate them, *e'dato'ndo'*.

A'pämä'dal(te) — "Struck-his-head-against-a-tree," a Mexican captive killed in Texas in the winter of 1866-67. From *äpädeä'dalgop*, "I strike my head against a tree;" *ä*, tree; *ä'dal-*, head, in composition.

äpäntsep—they left him (it) tied; I tie him (uncommon), *gyäpä'ñi*; I leave him tied, *gyäpä'ñtsep*.

ä'päta'—far up, far off; a word used in pointing out the top of a very tall tree, the end of a long rope or a sky depth; intended to convey the idea of going out of sight.

A'päta'te—"Far-up," from *ä'päta'* and *te*; a Kiowa rendering of the name of the Cheyenne chief, Wo'ifdo'ish, "Touch-the-clouds," killed by the Pawnee in 1852. He was also called K'a-t'ogyä, "Knife shirt," or Hâ'ñt'o'-gyäk'i'a, "Iron-shirt-man" (Cheyenne, *Mä-ai'-tai'-i'stsi-hi'nä'*), on account of a cuirass which he wore, probably taken from Mexico (see *k'a*, *t'ogyä*, *hâ'ngya*, *k'ia*).

Ä'pät'do' p'a—Cimarron river, Oklahoma, "river of trees with low spreading branches," from *ä*, *pä'tdo'*, and *p'a*. Also sometimes called *Doha'te-hem-de p'a*, "river where Doha'sän died" (in 1866), from *Doha'te*, *hem*, *-de*, and *p'a*.

ä'pätsä't—tree tops, from *ä* and *pätsä't*.

a'peñ—otter.

A'peñ-gu'ädal—"Red-otter;" a Kiowa warrior, brother of old Lone-wolf (see Winter 1873-74). From *a'peñ* and *gu'ädal*.

Ä'piatañ—"Wooden-lance;" a Kiowa delegate to the messiah, 1890, and to Washington, 1894; also spelled *Ah-pe-ah-tone* (*Report*, 113). The name implies a lance without a metal blade, like Set-t'aiñte's famous *zebat*, from *ä* and *piätañ'ga*.

ä'poto—a branch or limb of a tree; a forked stick or rod; one of the large forked poles which support the roof of the medicine lodge; from *ä* and *po'to'* (see story, Summer 1857).

ä'sähe'—ragweed (*Ambrosia psilostachya*), literally "green plant," from *ä* and *sähe'*. It is used medicinally by the Kiowa for persons and horses, and on account of the resemblance to its bitter taste the name has been transferred to pickles, *äsähe'*, whence also *ä'sähe'-toñ*, vinegar.

ase'—a creek or small stream. The word is seldom heard, *p'a* being generally used for all streams, large or small.

a'se'gya—spring (the season), an archaic word which can not be analyzed (see page 366). It is also known as *so'npa'ta*, "grass sprouting," from *son* and *gyäpa'ta*.

ä'semtse—he was stolen. I steal, *gyä-se'mdo* or *gyäse'mk'o*; I steal a horse, cow, etc, *gyäse'mk'op*; they stole them (horses, etc), *eda'se'mk'op*; thief, *se'mät*, hence their name for the Kiowa Apache.

Ä'sese p'a—Clear fork of Brazos river, Texas; literally, "wooden arrowpoint river," from *ä*, *se'se*, and *p'a*. The Comanche name, conveying the same meaning, is *Tä'ka-ho'novit*. Cf. *Se'sep'a*.

Ä'täbīts (Comanche)—see *Ė'sikwita*.

Ä'-tagu'i—the Lipan and the Mescalero Apache; "timber Apache," from *ä*, and *Tagu'i*. It seems to refer more particularly to the Lipan, the Mescalero usually being called by their Comanche name of *Ė'sikwita*.

ä'taha'-i—a war-bonnet, literally "feather crest," from *ä* and *taha'*. The war-bonnet is the most showy part of an Indian warrior's dress, and consists of a cap and crown of eagle feathers, with a pendant of the same feathers fixed in a broad streamer of red cloth or buffalo skin of sufficient length to trail upon the ground when the wearer stands erect. Cf. *ä'tä'lä'*.

Ä'taha'-i Gyä'gan-de Ase'—"creek where they bought the war-bonnet;" the fourth creek entering North fork of Red river from the north below Sweet-water creek, western Oklahoma; so called because some returning warriors brought to the Kiowa camp there a war-bonnet taken from the Ute (see Summer 1869). From *ä'taha'-i*, *gyä-ga'n,-de*, and *ase'*.

Ä'taha'-ik'i—"War-bonnet-man," a Kiowa warrior killed in Mexico in 1844-45; also known as *Set-k'o'dalte*, "Bear-neck;" from *ä'taha'-i*, *k'i*, *set*, *k'odal*, and *te*.

ät'a'kagu'a—antelope "medicine" for hunting antelope; literally, "they surrounded (*äka'gu'a*) antelope (*t'a*);" present, used only for ceremonial or

“medicine” surround, *ät'a'kayí'*. The common word is *egí'atä'da*, “they are surrounding him” (see Winter 1848-49).

Ä'-t'a'ka'-i—“timber Mexicans,” inhabitants of Tamaulipas and both sides of the lower Rio Grande; from *ä* and *t'a'ka'-i*.

Ä'-t'a'ka'-i Dombe, or *Ä'-t'a'ka'-i-gyă*—Nuevo Leon, Tamaulipas, and southeastern Texas; literally, “Timber-Mexican country,” from *Ä'-t'a'ka'-i*, *dombe*, and *gyă* (see *Toñhe'n-t'a'ka'-i-do'mbe*).

ä'tä'lä'—a feather headdress, an imitation from the Ute and other western tribes, made of feathers bent or doubled in a peculiar manner; from *ä* and *tä'lä'*.

Ä'tä'lä'te—“Feather-headdress,” a Kiowa warrior in 1888-89; from *ä'tä'lä'* and *te*.

a'tän—sour, bitter.

ätä'ndo—“he has a headdress of upright feathers;” said of one of the *Tseñtä'nmo*, q. v.

atän'ta—I am dissatisfied.

a'täntai'—salt, from *a'tän* and *t'aiñ* (?).

A'täntai'-gyä'k'udal-de'e'—“salt place,” “where there is salt;” the salt beds on the upper South Canadian, at the New Mexico line.

A'täntai' p'a—“salt river,” from *a'täntai'* and *p'a*; (1) Salt fork of Arkansas river, Oklahoma; (2) Elm fork of Red river, Greer county, Oklahoma; (3) a southern branch of the South Canadian, above *Dä'npeä p'a* (White-deer creek?), in the Texas panhandle, near where the Ute captured the *taíme* in 1868, and near the New Mexico line. Near it was a salt deposit, from which the Indians procured salt. The Salt fork of Red river is called by the Kiowa *Dä-mä'tan-ä p'a*, q. v.

ATAWAY-TAITI PAU—see *Ä'do-ee'tä-de p'a*.

Äte'stisti (Comanche)—“Little-horn,” a Comanche signer of the treaty of Medicine Lodge, 1867; spelled Ah-te-es-ta on the treaty.

äti—entrails. Cf. *sadal*.

ä'to—cowbird? The ordinary name for the common cowbird is *tseñ-gu'ato*, “horse bird.”

äto'n—bones, his (?) bones. Cf. *tem*.

Ä'to-t'aiñ—“White-cowbird,” from *ä'to* and *t'aiñ*; a Kiowa war chief, brother of Sun-boy, and killed by Texans in

1878-79. In 1874 Set-t'aiñte had given him his *zebat* or medicine lance, for which reason he was sometimes known as *Zebä-do-k'ia*, “Man-who-has-the-arrows” (plural form), from *zebä*, *gyädo'*, and *k'ia*.

Äyă—“Sitting-on-a-tree”(?). A boy saved from the Osage massacre in 1833. The name seems to be abbreviated from *Äyă'ngya*, “Sitting-on-a-tree,” from *ä* and *ä'ngya*, but may possibly be for *Äyă'n̄ti*, “(He is)-Walking-on-a-tree,” or *Äyă'n̄yi*, “Dreaming-on-a-tree.”

Ä'yä'daldä—“Timber hill,” from *ä* and *yä'daldä*; a hill near the southern Kansas line, on Medicine-lodge creek, hence called *Ä'yä'daldä p'a*.

Ä'yä'daldä p'a—“Timber-hill river” (see preceding); Medicine-lodge creek, which flows southward from Kansas into the Salt fork of the Arkansas. The noted treaty was made here in 1867 (see Winter 1867-68).

azä', *azai'*—udder.

Azä'tañhop—“those who went away dissatisfied on account of the udder,” from *azä'*, *atän'ta*, and *hop*; a traditional seceding band of Kiowa.

äzo'n—pomme blanche (*Psoralea esculenta*); a characteristic plains plant, the root of which is eaten in early summer by probably all the tribes of the plains.

äzo't—driftwood; a dam formed by driftwood; from *ä* and *zo'* (?), the root of the verb “to flow.”

Äzo't p'a—“Driftwood creek, from *äzo't* and *p'a*; Two-butte creek, a southern tributary of the Arkansas, below Bent's Fort in Colorado; so called from quantities of driftwood from freshets along its lower course. Near its head is a “double mountain” (Two buttes?).

Bab'i'pa' (Apache)—an Apache signer of the treaty of 1867, called on the treaty “Mah-vip-pah, Wolf's sleeve.”

badai'—(he is) appearing (as from over a hill); I am appearing, *äba'dai'*; he is appearing or coming in sight, *badai'* or *badä'*.

ba'dlo'—another name for hill, ridge, or bluff. Cf. *k'op*, *yä'daldä*, *do'ha'*.

Bü'o (-te)—see *Guñsa'dalte*.

bä'otse'yu—cat; from *bä'o* (onomatope ?) and *tse'yu*.

bätso'!—run to it! hurry toward it! implying hurrying to shelter or protection, as *tso' bätso'! k'op bätso'!*

BA-ZHE-ECH (Apache)—an Apache signer of the treaty of 1867, called on the treaty "Ba-zhe-ech, Iron Shirt."

be'dal—mouth; properly, lips; singular, *be'ia*.

Be'dalgu'ät—see *Do'gu'ät*.

be'dalpa'—beard; literally, "mouth down or fur," from *be'dal* and *pa*; the more common word is *senpo*, q. v.

Be'dalpa/go—white people, particularly Americans; literally, "bearded people," from *be'dalpa'* and *go*. Other Kiowa names for the whites are: (1) *T'a'ka'-i*, an old word signifying "prominent or flapping ears," from *t'a* and *ka'-i*, from the fact that the shorter hair of the white men makes their ears appear more prominent; the same name is also applied to a mule. (2) *Hãñpo'go*, "trappers," from *hã'ñpo'* and *go*, because some of the first whites known to them were American trappers. (3) *Ganoñ'ko*, "growlers," on account of their coarse voices, as regarded by the Indians. (4) *Gaño'to*, "cap wearers," from *gaño'to*. (5) *Bo'yoñko*, "blonds," singular, *Bo'yoñk'i'a*, from *boiñ* and *ko* or *k'ia*.

Be'dalpaheñ'ko—see *Te'guä-go*.

Belo—"Pedro," the Kiowa corruption of the name of a Carrizo (Mexican) captive, a Florida prisoner in 1875, and still (1897) living.

Be'shiltchă (Apache)—the Kiowa Apache name for the Kiowa.

Bi'äko—Viejo (?); a Mexican captive and a Florida prisoner in 1875; still living.

biän, biänta—large. Cf. *edal*.

bi'ändäta—it boils, boiling.

bi'äsot—shower, showery; *bi'äso'tdä'*, it is drizzling.

bi'ïmkä'-i—a parflèche box, pouch, box; wooden box, *ä'-o'kä'-i*.

bodal—abnormal, or useless (?); cf. *ka'-bodäl* and *T'a-bodäl*. A somewhat similar word, *p'o'dälta*, in composition, *p'o'däl*, q. v., signifies decayed or rotten.

Bo'he'—not translatable and probably of foreign origin; a Kiowa man still living, said to have six fingers on each hand. His brother, *Masa'te*, "Six," had six toes on each foot.

boho'n—cap, especially a war cap, ornamented with feathers, and sometimes with buffalo horns. *Bo'ho'nta* or *k'an-bo'ho'nta*, (a white man's) hat, from *boho'n* and *k'an*, squeezed or compressed, perhaps referring to the split in the middle or to the brim doubled up.

Boho'n-ko'ñkya—"Black-cap;" a former Kiowa chief, one of the signers of the treaty of 1837, where his name appears as "Bon-congais, the Black Cap." Catlin painted his picture in 1834 (pl. LXXVI herein) under the name of "Bon-son-gee, the New Fire." Imo'tä, a son of Ä'dalpe'pte, is properly Boho'n-ko'ñkya, named from this chief.

bo'iñ—blond, bright. Cf. *tsõnda*.

Bo'iñ-e'dal—"Big-blond;" a German captive, taken in 1835, still living among the Kiowa (see Summer 1835).

Bo'loi—not translatable, probably corrupted from a foreign (Spanish?) name; a Mexican captive and Florida prisoner in 1875, still living.

BON-CONGAIS—see *Boho'n-ko'ñkya*.

bo'npä—sweathouse; more commonly called *sä'dalgu'ät*, from *sä'daltep*, sweat.

Bo'npä p'a—see *Tépgañ p'a*.

BON-SON-GEE—see *Boho'n-ko'ñkya*.

Bon toñ—"stinking water, or spring," from *gyäbo'nse*, it stinks, and *toñ* or *toñtep*; a water hole on the Staked plain, probably so called on account of sulphur or alkali impregnation. Probably Sulphur springs, in Martin county, Texas, at the head of the Colorado.

bot—stomach, belly.

Bot-e'dalte—"Big-stomach," from *bot*, *e'däl*, and *te*; a Kiowa woman who died in the winter of 1882-83.

Botk'i'ägo—Arapaho Grosventres; "belly people," from *bot* and *k'i'ägo*. Cf. *Ä'hyäto*.

Bo'yoñko—see *Be'dalpa/go*.

byu'ñi—circle, circular.

CATAKA—see *Tagu'i* and Kiowa Apache synonymy.

CAYGUA—Spanish form of *Gä'igwü* (see Kiowa synonymy).

CEAR-CHI-NEKA—see *Si'äch'i'nika*.

CET-MA-NI-TA—see *Setmä'nte*.

CHA-HON-DE-TON—"Cha-hon-de-ton, the Flying Squirrel," the name of a Kiowa signer of the treaty of 1837, as it appears in the document.

Cho'nshita' (Apache)—An Apache signer of the treaty of 1867. The name appears on the treaty as "Cho-se-ta, or Bad Back."

CHO-SE-TA—see *Cho'nshita'*.

COMALTY—see *Â'daltoñ-e'dal*.

CON-A-HEN-KA—"Con-a-hen-ka, the Horne Frog" (sic), a Kiowa signer of the treaty of 1837, as the name appears in the treaty. The horned frog (toad or lizard) is called *se'hän*, and the correct name may possibly have been *Se'hänk'i'a*, "Horned-toad-man." In the treaty of 1867 *T'ene'-ango'pte*, "Kicking-bird," appears as "Ton-a-en-ko or Kicking Eagle."

CORBEAU—see *Gaa'-boho'n*.

dä—(1) eye; (2) star.

-dä—kill (in composition).

Da do'ha'—"medicine bluff," from *da'-i* and *do'ha'*; Mount Rochester, etc, on the upper South Canadian, Texas panhandle.

Da'goi—a Kiowa hero (see story, Summer 1857). The name seems to contain the word *da'-i*, "medicine."

da'gya—song.

Daha (Apache)—a Kiowa Apache chief and delegate in 1872; still living.

Da'hä'te—see *Mamä'nte*.

daho'tal—they kill us. See *eho'tal*.

da'-i—"medicine," sacred, religious, mysterious; *da'-i*, "medicine," in the ordinary English sense, is sometimes distinguished from *da'hä*, medicine, in the Indian sense of sacred or mysterious; *Dak'i'a*, God; *Daki'ada*, Sunday.

Daki'ada—Sunday; "medicine day," from *da'-i* and *ki'ada*.

Daki'a-sä'n—Saturday; "little medicine day," from *da'-i*, *ki'ada*, and *sän*.

dam—(1) war path, war expedition; (2) first.

Dä'-mä'ta'n(-ta)—"star girls," from *dä* and *mä'ta'n*; the Pleiades. There is a myth to account for the name. A ceremonial invocation and sacrifice were formerly made to them by mothers on behalf of their sick children, but the last priestess of the ceremony is now dead.

Dä'-mä'ta'n-ä' p'a—Salt fork of Red river in Greer county, Oklahoma; literally, "Star girls (i. e., Pleiades) tree river," from *Dä'-mä'ta'n*, *ä*, and *p'a*; so called from a noted tree formerly there, which grew from the sprouting

of a twig driven into the ground to support the "medicine" on occasion of a ceremonial sacrifice performed by the mother of Stumbling-bear (see above). The tree was about 30 miles up the creek and was finally cut down by the Comanche.

da'm-koñ'kya—evening; literally, "first darkness," from *dam* and *koñkya*; also called *deko'mdo'le(-gya)*, from an archaic root referring to slight darkness.

dan—canyon, pass.

dan'—shoulder.

Da'npä'—see *Dohasän* (4).

dä'npa'-iñgya—crown of the head.

Dä'n-pa'-iñgyat'a'-i—"Bald-head," "bald on the crown of the head," from *dä'nto'*, *dä'npa'-iñgya*; Lawrie Tatum, agent for the Kiowa and allied tribes, 1869–1873.

dä'nto'—bald; I am bald, *ä'dä'nto'itä'*.

Da'tekâ'n—"Keeps-his-name-always;" it contains the root of *kâ'ñgya*, name; a Kiowa who assumed the role of prophet in 1881–82, taking the name of *Pa'te'pte*, "Buffalo-bull-coming-out," from *pa*, *tep*, and *te*.

Datûmpa'ta (Hidatsa?)—given as the Hidatsa name for the Kiowa (see Kiowa synonymy).

Däve'ko (Apache)—a Kiowa Apache chief and medicine man.

-de (in composition)—(1) all, many; (2) a possessive suffix ("of"), sometimes equivalent to "when," "where," or "there," as *Pai'-tälyi'-de tseñko*, Sun-boy's horses; *Pa'-ä'ngya tsä'n-de sai*, "winter when Sitting-bull came," "winter of Sitting-bull's coming."

De'ä' p'a—"All-kinds-of-trees creek," or "Many-trees (or bushes) creek;" a stream in Kansas somewhere about Fort Dodge.

-de'e'—there is, where is; a suffix in composition.

degañ'ta—I trade (either buying or selling); *gañta*, trading; *gañ'ta do'*, trading house; *gañ'tak'i'*, trader.

de'hi'ñ—late afternoon, after about three o'clock. Cf. *deki'äsa*.

deki'äsa—afternoon, until about three o'clock. Cf. *de'hi'ñ*.

deko'mdo'le(-gya)—see *da'mko'ñkya*.

de'ngyä—ice.

De'ngyä-ko'ñ k'op—"Black-ice mountain," from *de'ngyä*, *ko'ñkya*, and *k'op*; a mountain on the southern edge of the

- Staked plain; so called from the appearance of the ice frozen on the branches of the trees after a rain while a Kiowa war party camped there (see Winter 1834-35).
- de'no'te'li—gypsum; the word contains *te'li*, "white clay." The Kiowa use it, when burned, to fasten arrowheads.
- De'no'te'li p'a—Gypsum creek, Greer county, Oklahoma; "gypsum creek," from *de'no'te'li* and *p'a*.
- do—an intensive in composition, equivalent to "very" or "too," as *do'ye't*, very large.
- do'—tipi, house; plural, *do'ta*.
- do'-a'—"tipi game," from *do'* and *a*. For description see Winter 1881-82.
- do'ä'—a circular windbreak or fence of brushwood around a tipi to keep off the force of the wind; from *do'* and *ä*.
- Doä'dal koñ'kya—"Black-kettle" (plural form); the Kiowa name of the Cheyenne chief "Black-kettle," killed in the battle of the Washita, 1868. See the next.
- Doä'dal-koñ'kya-eho'tal-de'e—"where Black-kettle was killed," from *Doä'dal-koñ'kya*, *eho'tal*, and *de*; the place of the "battle of the Washita," in western Oklahoma, November 27, 1868.
- do'a't—condition of ceremonial mourning; in mourning; *do'ätta*, he is in mourning. At such times they gash themselves, cut off their hair and the hair of their horses' tails, neglect their dress and discard their ornaments and paint, isolate themselves and wail night and morning in lonely places. The regular word for "crying" is *a'lyä*.
- doä'to, plural doä'dal—pot, kettle; *koä'to*, plural *koä'dal*, plate, pan.
- do'bä—face; in composition *do*.
- Do'-e'dalte—"Big-face;" a Kiowa warrior killed in 1835-36.
- dogä'i—white faced (as applied to an animal); having the face of a color different from that of the rest of the body; from *do'bä* and *gä'idä*. Cf. *Gä'igwü*.
- Do-gi'ägyä-gu'ät—"battle picture tipi," from *do'*, *gi'ägyä*, and *gu'ät*; the hereditary tipi of Doha'sän's family (see Winter 1872-73 and plate LXXIX).
- do'go't-ä'—oak, oak tree, literally "very hard wood," from *do*, *got*, and *ä*; they now say *ka'do'li-ä*, which conveys the same idea, on account of the death of a woman named Do'go'tä about five years ago. *Do'go't-e'*, acorn, literally "oak fruit."
- Do go't-ä p'a—Oak creek or Post-oak creek, a small southern tributary of the Washita in County H, Oklahoma; literally, "oak creek," from *do'go't-ä* and *p'a*. The name has recently been changed to *Ka'do'li-ä p'a* (see the preceding).
- Do'gu'at—Wichita, with their cognate tribes the Waco and Tawakoni, and presumably also the Kichai; singular *Do'gu'atk'ia*, literally "pictured, or tattooed faces," from *do'bä* and *gu'ät*, on account of their practice of tattooing; sometimes also called *Be'dalgu'ät*, "tattooed mouths;" singular, *Be'dalgu'ätk'i'a*, their Comanche name; *Do'ka-na* conveys a similar meaning. They call themselves *Kitikiti'sh*, spelled *Kidi-ki-tashe* in the Greer county testimony.
- Do'gu'at k'op—"Wichita mountain," from *Do'gu'ät* and *k'op*. The Kiowa call by this name only those at the western end, between Elk creek and the North fork of Red river, on the reservation, in the vicinity of the old Wichita village (see Summer 1834). For the rest of the group they have names only for particular peaks.
- do'guä'tal—a young man.
- Do'guä'tal-e'dal—"Big - young - man," from *do'guä'tal* and *e'dal*; a sacrilegious Kiowa warrior in 1861.
- Do'guä'tal-tai'de—"Young - man - chief," from *do'guä'tal* and *tai'de*; agent Lieut. Maury Nichols, in charge 1893-94.
- do'gyäho'n—she was frozen; I am freezing, *ädo'gyäho'n*.
- do'ha'—bluff.
- Doha', Doha'te, or Doha'-sän—"Bluff" or "Little-bluff," from *do'ha'*, *sän*, and *te*; the hereditary name of a line of chiefs in the Kiowa tribe for nearly a century. The name has been borne by at least four of the family, viz: (1) The first of whom there is remembrance was originally called *Pa'-do'gä'-i* or *Pado'gä*, "White-faced-buffalo-bull" (from *pa* and *do'gä'-i*), and this name was afterward changed to *Doha'* or *Doha'te*, "Bluff." He was also a prominent chief. (2) His son was

originally called *Ī'anoñ'te* (a word of doubtful etymology), and afterward took his father's name of *Doha'te*, which was changed to *Doha'sän*, "Little Dohate," or "Little-bluff," for distinction. He became a great chief, ruling over the whole tribe from 1833 until his death in 1866. His portrait was painted in 1834 by Catlin, who calls him *Teh-toot-sah*, and his name appears on the treaty of 1837 as *To-ho-sa*, the "Top of the Mountain." (3) His son, whose widow is *Anki'mä*, inherited his father's name, *Doha'sän*, was also a distinguished warrior, and died about three years ago. His scalp-shirt and war-bonnet case are now in the National Museum. (4) The nephew of the great *Doha'sän* II and cousin of the last mentioned (3) was also called *Doha'sän*, and always wore a silver cross with the name "Tohasan" engraved upon it. He was the author of the Scott calendar, and died in 1892; shortly before his death he changed his name to *Da'npä'*, "Shoulder-blade," from *da'n*, "shoulder" (?), leaving only *Anki'mä's* husband (3) to bear the hereditary name, which is now extinct.

Doha'te-he'm-de p'a—see *Ā'pät'do' p'a*.

Dohe'ñko—the Carrizo, and probably also the Karankawa; "shoeless people," from *do'ti*, *heñ-*, and *ko*. The Tonkawa also called both these tribes and others on the Texas coast the "shoeless" or "barefoot people" (Gatschet). The Kiowa know the name Carrizo from having still among them some captives of that tribe, and state that they wore sandals instead of regular moccasins. Also called *Ká'nhe'ñko* and *Yi'atä'te-heñko*, from *kân* and *yi'atä'te*, other synonyms for *do'ti*, moccasin, q. v.

Dohe'ñte—"No-moccasins," or "Barefoot," a keeper of the *taíme*, who succeeded *Anso'te* in 1873 and died in the winter of 1875-76; called *Tohaint* by Battex.

Do'ho'n—Mandan, said to mean "last tipi," from *do'+*; an older form of the same name is *Dowa'koho'n*, and they are also sometimes called *Sa'bä'*, "stingy."

do'ka'ñi—bark (of a tree); contains *ka'ñi*, shell or rind.

Do'ka'ñi k'op—"bark mountains," the Santa Rosa mountains in northern Coahuila, Mexico.

Do'ka'ñi-t'a'ka'-i—"Bark (mountain) Mexicans," those in the vicinity of the Santa Rosa mountains, Coahuila (see the preceding).

Do'-ko'nsenä'go—Chiricahua Apache; "People of the turned-up moccasins," from *do'ti*, *ko'nsenä'*, and *go*; the "Hooked or Curved Toe Apache" of Clark (page 33). They are now prisoners of war at Fort Sill on the reservation, and were known to the Kiowa under this name before their removal from Arizona.

dom, dām—(1) earth; (2) under, in composition.

Doma'ñk'i'ägo—see *Gu'igyä'ko*.

do'mba'—bugle, flute, flageolet. Nearly every tribe of the plains and eastward has its native flute.

do'mbe—country, region, from *dom* or *dām*.

Domo'ntoñ—ocean; literally "seems "water surrounding the earth," from *dom* and *toñ*. They have no specific names except by description.

do'n—fat (noun); I am fat, *ädo'n*.

Do'n p'a—South Platte river; "fat river," on account of the former abundance of the buffalo there. According to Clark, the South Platte is known to the tribes as Fat or Greasy or sometimes as Goose river.

do'nä'i—pecan; literally, "fat or oily tree fruit," from *do'n*, *ä* and *i* or *e*. Another name is *oñ'guä*.

Do'nä'i p'a—(1) Elk creek of North fork of Red river, on the reservation; it was formerly called *Ko'ga'-i p'a*, "Elk creek." Elk have been seen in the adjoining portion of the Wichita mountains within the last twenty years. (2) Nueces river, Texas, called also *Nakü'tävä hono*, "Pecan river," by the Comanche. The Kiowa name also signifies "Pecan river." (3) The southernmost tributary of *Señ p'a* (Salado, Nuevo Leon, Mexico), i. e., probably the Sabinas Hidalgo branch (lower Salado).

doñ'iga—far below, as at the bottom of a well or canyon. Deep is *zoñ*.

Doñ'iga-p'a'da'-de'e or *Doñ'iga-p'a-k'a'dee*—Cataract canyon; Colorado

- canyon, Arizona; literally, "it has," or "there is" (*da'*) a river (*p'a*) lying (*k'a*) there (*de'e*) far below (*doñ'iga*). The Kiowa have visited both canyons, and tell of killing several Havasupai (Coconino), who seemed unused to enemies, in a raid upon their canyon home on Cataract creek.
- do'npä*—cat-tail rushes (*Equisetum arvense*), singular, *do'npä'ga*. The name is connected with *do'n*, "fat," from the resemblance in the edible portion; kidney fat is also called *do'npä*. The Indians eat raw the soft white portion at the base of the stalk.
- do'ti*—moccasin, shoe; this is the oldest word, and has held its own. Other words used instead at various periods on account of deaths, are *yi'atä'te* and *kän*.
- Dowa'koho'n*—see *Do'ho'n*.
- e*, or *-i*—fruit, berry, grain, nut, in composition; perhaps same as *i*, child or offspring, q. v.
- e'däl*—great, large, big; another word used is *bi'än*, *bi'äntä*. Variants are *et*, *e'do'* or *e'dä'*, and *e'e't*; *edal* is generally used for animate objects and for tipi or house; *e'do'* or *e'dä'* is used for inanimate objects generally; *et* is generally used for inanimate objects, but may also be used for man, horse, and dog; *e'e't*, a plural form, is used for tree, box, and some others. It is large, *et*; they are large, *ebi'än*.
- eda'se'mk'op*—they stole them (horses). Cf. *ä'semtse*.
- edo'nmo*—they are searching or hunting for something; I search or hunt for, *gyädo'nmo*.
- edo'päñ*—they were initiated as *Kä'i-tseñko*. (Cf. *äo'päñ*.)
- eet*—see *edal*.
- e'gu'*—a plant (i. e., something planted to grow from seed or cutting; not something growing without human aid); from *e* and *gu'ä*, to plant; I plant, *gyäte'gu'ä'dä*; plant it! *bäte'gü'*!
- E'gua p'a*—Chandler creek, on the reservation; literally, "Garden creek," from *e'gu'* and *p'a*, because the Apache had their principal cornfields there.
- eho'tal*—he was killed; I kill him, *gyäho'taldä*; he killed him, *äho'tal*; I killed him, *gyäho'tal* (*gyäho'tl*); they killed us, *daho'tal*; kill him! *äho'!* *ho'täl!*
- ek'i'ädä*—it sprouted, it has sprouted, it is growing; said of the young plant when it appears above ground; *gyä-k'i'ädä*, growing, sprouting. Cf. *gyä-k'i'ädä*.
- E'mä*—not translatable; a Kiowa woman, keeper of the *taime* since 1894.
- E'oñte*—a Kiowa man, otherwise known as *Gu'ädal-e'dal*, "Big-red;" the word may have connection with *eoñ'ti*, I like him.
- eoñ'ti*—I like him. Cf. *Gyai'koao'ñte*.
- E'pea*—"We-(they-) are-afraid-of-him," from *gyäpe'to*; a Kiowa warrior, who died a prisoner in Florida after 1875.
- ES-A-NANACA*—see *Īsänä'näka*.
- Ē'sikwi'ta* (Comanche)—"brown dung," so called, it is said, from the color produced by eating piñon nuts in the mountains, or perhaps an allusion to the appearance of the favorite "mescal bread" of the tribe. Mescalero Apache; a Comanche name adopted by the Kiowa to designate the same tribe; sometimes also called *Ätäbits* by the Comanche; under the name of *Essequeta* or *Essequeta Apache*, the Kiowa Apache have sometimes been confounded with them, and the Kiowa sometimes confound them with the *Ä'-tagu'i* or Lipan.
- ESSEQUETA*—see *Ē'sikwi'ta*.
- et*—see *edal*.
- eta'ga*—they shot it, or them; I shoot, *deta'bo'*; I shall shoot, *deta'tito'*; I shot (either with bow or gun), *deta'ga*; shoot! *beta'de'*!
- E'tälyidonmo*—"He-(they-) hunts-for-boys," from *tä'lyi'* and *edo'nmo*; a Florida prisoner in 1875, afterward a student and worker in his tribe.
- etku'egan*—they brought it dragging (i. e., a head); I drag it, or him, *deku'eba'*; I bring it dragging, *deku'egan*.
- eto'dä*—they (poles) were left standing; I leave it standing, *deto'di'to*.
- e'tpata*—they ate it (ashes); I eat, *gyäpa'ta*. Cf. *gyäpa'ta*, it is sprouting.
- etpe'*—they were afraid, or frightened. Cf. *gyäpe'to*.
- e'zän*, *e'zhän*—agent, i. e., Indian agent; corrupted from "agent."
- E'zänyä*, *E'zhänyä*—the agency, at Anadarko, Oklahoma, from "agent," "agency;" sometimes referred to as *Ägun'tä p'a'-gyä*, "at Washita river," or *E'zän-do'i*, "at the agent's house."

FISH-E-MORE—see *T'a'ka'-i-p'o'dal*.

gaa'—an archaic name for crow (now *ma'ñsă'*; cf. *mă'să'*, six), still used in composition in proper names.

Gaa'-boho'n—"Crow-bonnet;" a Kiowa chief, signer of the treaty of 1867, where he is called "Corbeau, or The Crow." He never wore a shirt, but in winter threw a buffalo robe over his naked shoulders.

Gaa'-k'i'ägo—Crow Indians, "Crow people;" it is said they are sometimes called also *Koñ-k'i'ägo*, "black people," but this is probably another name for the Ute or *I'atä'go*, q. v.

Gaa'-k'o'dalte—"Crow-neck," from *gaa'*, *k'o'dal*, and *te*; a Kiowa chief, who died in 1842.

Gaa'piata'n—"Feathered-lance," from *gaa'yi* and *pi'atañ'ga*; an old Kiowa war chief, better known as Heidsick, a corruption of *Hai'tsiki*, the Comanche rendering of his Kiowa name.

gaa'yi—a feathered lance sheath, made usually of red cloth with pendent eagle feathers and drawn up over the shaft of the lance, leaving the blade exposed.

ga'bodälyi' or *ga'bodli*—sheep or goat; possibly from the Spanish *cabra*. The wild sheep is called *teñbe*, and the name is sometimes applied also to the domestic sheep.

Ga'bodly k'op—see *Teñbe k'op*.

ga'dal—buffalo; now sometimes used also for cattle; *pa*, a buffalo bull.

ga'dal-ä'—see *ta'-ä*.

Gadalkoko—see *K'iñ'ähi-pi'äñko*.

Gado'mbitso'ñhi—"old woman under the ground;" a sacred image formerly belonging to the Kiñep division (see page 239).

Gä'i—Kiowa, in composition; *Gä'i-gwü*, the Kiowa tribe; *Gä'imä*, a Kiowa woman; *Gä'idö'ñ*, the Kiowa language; *imgä'idö'ñ*, say it in Kiowa.

Gä'i K'at'a—see *K'at'a*.

Gä'i k'op—"Kiowa mountains;" that portion of the Rocky mountains at the head of Missouri and Yellowstone rivers; so called because the Kiowa formerly lived there. Farther south they are called *I'ätä k'op*, "Ute mountains," and in Mexico, *K'ob-e'tä*, "great mountains."

Gä'i-gwü'—(1) the Kiowa tribe; (2) one of the recognized six divisions of the

Kiowa tribe, and probably the original nucleus of the tribe. In this word the root is *gä'i*, while *gwü* is the tribal suffix, more usually formed as *go* or *ko*, q. v. The word seems to be derived from *gä'idä*, implying having a half or part of different color from the rest; perhaps in this case alluding to some old style of face or body paint or to the former custom of wearing the hair cut short on one side of the head, as already noted. A feather of the war eagle is described as *gä'idä'*, because one-half of it is white and the other black; a white-face horse is called *do'-gä'idä'*. Cf. *Pa-do'gä'-i*, "white-face-buffalo-bull."

ga'kiñ—ten. Cf. *pägo*.

Ga'kiñäte—"Ten," from *ga'kiñ* and *te*; a Kiowa warrior, brother of Lone-wolf, 1883-84.

Ga'kiñät'o P'a—"moon of ten cold (days)," from *ga'kiñ*, *gyät'o'*, and *p'a*; the first moon of the Kiowa year, comprising parts of September and October (see page 368).

gañ—goose.

Gañe'tä—see *O'honoñ-yä'däldä*.

Gañhi'ña P'a—"real, or principal, goose moon," from *gañ*, *hiñ*, and *p'a*; a Kiowa moon or month, including parts of December and January (see the calendar).

Gano'ñko—see *Be'dalpa'go*.

Gañ'sa—Kansas or Kaw Indians; from their own name.

Ga'ñsûñko—see *Ga'ñsa*.

Gañ'ta p'a—Double-mountain fork of Brazos river, Texas; literally, "Trading river," from *degañ'ta* and *p'a*. The name may have originated from the fact that a trail, by which the Indians passed around or across the Staked plain to New Mexico, ran along the stream.

gañton—a soldier's cap or visor.

Gañton'to—see *Be'dalpa'go*.

Ga'nu'än—see *Pa'sotkyät'o'*.

Ga'ta'ka—see *Tagu'i* and Kiowa Apache synonymy.

gi—(1) meat, flesh; (2) abbreviation of *giñ'agya* or *gi'ñde*, q. v.

gi'ädal, *gyä'-gi'ädal*—to dwell; he dwells.

Gi'ädede'te—"He-faces-the-line" (as of soldiers), from *gi'atiüpa'ntä*, "I face the line;" a Kiowa warrior killed in Mexico in 1843-44.

Gi'agu'ädälta'go — Indians; literally, "people of red flesh," from *gi*, *gu'ädal*, and *go*.

gi'ägyä—battle, coup; I am fighting, *depai'gop*; I strike in battle, *gyä'gi'ägop*.

gi'äka'-i—"back hide," from *gi'apa'-iñgya* and *ka-i*, a piece of rawhide worn over the shoulders by women to protect the back when carrying wood or other burdens; sometimes called *gi'gyä-ka'-i*.

Gi'äka'-ite—"Back-hide," from *gi'äka'-i* and *te*; an old man who was abandoned to die in the winter of 1859-60.

gi'äni—long, tall, as a tree, tipi pole, etc; for things not usually erect (fence, string, pencil, etc) and for man, the common word is *gyu'ni*.

gi'apa'-iñgya—back (of the body). Cf. *go'mtä*.

Giatä' P'ada'ti—see *Ai'koñ p'a*, 2.

Gi'-edal—"Big-meat;" a Kiowa warrior killed in New Mexico in the winter of 1874-75.

gi'gyäka'-i—see *gi'äka'-i*.

giñ'aga—very early in the morning. Cf. *giñ'ägya*.

giñägya—night; abbreviated *giñde* or *gi*; *pägo gi*, one night. Cf. *giñ'aga*.

Ginä's (Wichita)—see *Tagu'i* and Kiowa Apache synonymy.

giñäto'gya—after midnight; from *giñägya* and *togya*.

giñde—see *giñägya*.

giñ-kopa'-iñgya—midnight, from *giñägya* and *kopa'-iñgya*.

go—(1) and; (2) see *-ko*.

go'be—wild horse.

Go'be—"Wild-horse," a Florida prisoner in 1875.

Go'ho—"Kick," from *gyä'ango'p*; a Mexican captive and Florida prisoner in 1875.

go'm-ä'dal-hä'ñgya—"back hair metal," from *go'mtä*, *ädal*, and *hä'ñgya*; a strap or strip of red cloth ornamented with silver disks, worn pendent behind from the scalp-lock. Cf. *ä'dalhä'ñgya*.

Gomä'te—see *Ä'dalton-e'dal*.

go'mgyä—wind; the wind is blowing, *go'mde'*.

Go'mgyä dan "wind canyon;" a canyon pass at the extreme head of Double-mountain fork of Brazos river, Texas.

go'mtä—back (of the body); in composition, *gom*. Cf. *gi'apa'-iñgya*.

Goñk'o'n (Apache)—an Apache chief and delegate to Washington in 1894, commonly known as Apache John.

gu'a-da'gya—the "travel song," sung by a war party on setting out (see Winter 1862-63). The literal meaning may be "wolf song," i. e., *gu'i-da'gya*. "Just before a war party sets out, its members get together and sing the 'peeling a stick song,' which is a wolf song; also, if a person is hungry and sings a wolf song he is likely to find food. Men going on a hunting trip sing these songs, which bring them good luck."—Grinnell, *Blackfeet*, 2.

gu'ädal—red; it is practically a synonym for "paint," red being the favorite and most sacred color with all Indian tribes. It is red, it is painted, *gu'ädaldä'*. Cf. *gyä'gu'ätda'*.

Gu'ädal do'ha'—"red bluff;" a bluff on the north side of the South Canadian, about the mouth of Mustang creek, and a few miles above Adobe Walls, in the panhandle of Texas. A principal trail crossed there and a trading post was established there by William Bent in 1843-44. It was here that Carson had his fight with the Kiowa in 1864. Cf. *Sä'k'odal Gu'ädal Do'ha'*.

Gu'ädal k'op—(1) "red mountain;" a small mountain near Eagle-heart's camp, upper Rainy-mountain creek, on the reservation. (2) A mountain in Colorado described as being north of Arkansas river, a short distance above the river of Colorado Springs, and on an extreme northern head branch of the Arkansas. This description would seem to make it Pike's Peak, the most prominent peak of that region, but the statement of direction may be an error for Red mountain, southward from the Arkansas, and southwest of Pueblo.

Gu'ädal p'a—"red river;" (1) the South Canadian; (2) Big Wichita river, Texas.

Gu'ädal-e'dal—see *E'oñte*.

Gu'ädalka'pä—"paint (red) is there;" a rocky bank eastward from Se't-ïmki'a's camp on Äda'n p'a, from which the Kiowa procure a red mineral paint.

Guadal-k'udal-dee p'a—"paint-is-there creek;" Clay creek, a southern tributary of the Arkansas, in Colorado; so called

on account of the abundance there of clay paint. Also sometimes called *Yädaldä p'a*, "Hill creek," on account of the Two Buttes near its head.

Gu'ädaloñ'te—"Painted-red," a Kiowa leader about 1839. The name implies that he had red paint upon his body, face, or hair, from *gu'ädal*, paint, or red; *gu'ädaldä'*, it is red or painted.

Gu'ädaltse'yu—"Red-pet," or "Little-red," from *gu'ädal* and *-tse'yu*, a noted race-horse stolen by an escaping Pawnee prisoner in 1852-53.

gu'ak'o—yellow.

gu'än, *gu'änkya*—dance; I dance, *de-gu'änmo*. Cf. *guntä* and *gun*.

Gu'a'na—Quanah Parker; the Kiowa form of his Comanche name *Kwäna* or *Kwaina*, "fragrant." He is a half-blood, the head chief of the Comanche, being the son of a Comanche chief by a captive white woman, Cynthia Parker (see the following).

Gu'a'na-de-ta'ho—Adobe Walls, on the north side of the South Canadian, just west of 101°, in the panhandle of Texas. The name signifies "where Quanah led his confederates," i. e., "Quanah's battle ground," alluding to the noted battle there in June, 1874 (see page 203).

Gu'a'na-de p'a—see *Gwa'hale p'a*.

Gu'añteka'na (Apache)—see *Se't-ta'dal*.

gu'ät(-gya)—picture, brand, tattoo, writing, etc, from *gyä'gu'ätä'*.

gu'äto—bird (see *t'e'ne'*).

gu'äto'hiñ—eagle; literally, "principal bird," from *gu'äto* and *-hiñ*.

Gu'ätoi p'a—"small bird creek" (not *Gu'äto'hiñ p'a*, "eagle creek"), from *gu'äto* and *-i*; a stream somewhere southwestward from Double mountain, Texas, near the old California emigrant trail (*Ho'an-t'a'ka'-i*).

Gu'äto-ko'ñkya—"Black-bird;" a Kiowa signer of the treaty of 1867, where the name appears as "Wa-toh-konk, or Black Eagle."

gu'ätoñ—ribs; singular, *gu'äte'm*, from *tem*.

Gu'ätoñ-bi'än—see *Se't-t'ai'ñte*.

Gu'äto-ze'dalbe—"Dangerous-eagle;" a Kiowa chief about 1876, brother of Big-tree. Although the name is really "dangerous bird," the *gu'äto* is under-

stood to be here an abbreviated form in composition of *gu'äto'hiñ*.

gu'i—wolf (generic); the gray wolf is *gui-t'ai'ñmo*, from *t'aiñ*, "white;" the coyote is sometimes distinguished as *gui ma'ñtoñ-tso'ñi*, "sharp-nose wolf."

Gui p'a—"wolf creek;" Wolf creek, upper branch of North Canadian, Oklahoma.

Gu'i-bada'i—"Appearing-wolf," or "Wolf-coming-in-sight," from *gu'i* and *badai'*; a Kiowa warrior in 1873.

Gu'i-bo'tte—"Wolf-stomach," from *gu'i*, *bot*, and *te*; a Kiowa warrior in 1875; died while a prisoner in Florida.

Gu'igyä' p'a—"Pawnee river," from *Gu'igyä'ko* and *p'a*. A river, probably the Kansas (Kaw) or one of its branches, the Smoky-hill, Saline, Solomon, or Republican, described as between the Arkansas and the Platte, but not tributary to either (see Summer 1834).

Gu'igyä'ko—Pawnee; literally, "wolf people," from *gu'i* and *k'i'ägo* or *gyäko*; sometimes called *Doma'ñk'i'ägo*, "walking people," from *dom*, —, and *k'i'ägo*. SIGN: Two fingers erect and forward at right side of head—i. e., "horns" or "ears;" then index finger turned and thrown out to front—i. e., "man" (see Summer 1833, Winter 1849-50).

Gu'i-k'a'te—"Wolf-lying-down," from *gu'i*, *äk'a'* and *te*; (1) a Kiowa warrior killed by the Cheyenne in 1838; (2) a Kiowa delegate to Washington in 1872; his name has been rendered "Sleeping-wolf."

Gu'i-k'o'dal-te p'a—"Wolf-necklace's river;" a branch of White river, of the Brazos, Texas; so called from a Comanche known to the Kiowa as Wolf-necklace (or Wolf-neck?).

Gu'i-koñ'kya—"Black-wolf;" a Kiowa warrior killed by American traders in 1832-33.

Gu'i-pä'go—"Lone-wolf." (1) A principal Kiowa chief, leader of the hostile element in 1874; sent as prisoner to Florida at the close of the outbreak. (2) His adopted son, namesake, and successor, and present head chief of the tribe.

guñ—horn.

Gunpä'ñdamä—"medicine-tied-to-tipi-

pole;" a Kiowa girl captured by the Osage and returned to her friends by the dragoons in 1834. Catlin, who painted her picture, calls her "Wun-pan-to-mee, the white weasel." *Gu'npä'näda'-i* is the owner's "medicine," or protecting talisman, usually kept in a bag or pouch tied inside the tipi and just above the junction of the bed curtain to that one of the three principal poles which stands nearly opposite the entrance. The Cheyenne sometimes hang it outside, near the door. The word is compounded from *guntä*, tipi pole, *da'-i*, medicine, and *pä*, the root of the verb *gyäpä'-imo*, I tie. The suffix *-mä* makes it a feminine name. The medicine, as also the tipi pole to which it is attached, are also called *komtä'ga* or *komtä'-gu'n-da*. In this case the medicine may have been inclosed in a bag made of white ermine skin. The three principal tipi poles tied together are called *gunpä* (*gun* and *pä*); the Comanche tipi has four principal poles.

Guñsa'dalte—"Horned" or "Having-horns," from *guñ*, *sadal*, and *te*, perhaps from his having some time worn a ceremonial cap with buffalo horns. A Kiowa warrior, still living, who acted as Kiowa interpreter at the treaty of 1867. Sometimes also known as *Bä'o*, "Cat."

guñse'to—lance, spear; an old form used in personal names is *pi'ätäñ'ga*, from *pi'a'ta'ga*, "he stabs with a spear."

guntä—tipi pole; plural, *gun*. Tipi poles are made preferably of cedar, on account of its durability and freedom from liability to warp; they are sometimes made of cottonwood. Twenty is the average estimate to a tipi, besides the two outside poles. Cf. *gu'än*, dance.

Gusa'ko—see *Kapä'to*.

Gwa'hale p'a—"Kwahadi creek;" West Cache creek on the reservation. From the fact that Chief Quanah lives upon it, it is sometimes called *Gu'a'na-de p'a*, "Quanah's creek."

Gwa'hale'go—(1) Kwahadi Comanche, the westernmost and most warlike portion of the tribe, formerly ranging principally about the Staked plain, under the immediate leadership of Quanah,

present head chief of the whole tribe; the Comanche word is said to signify "antelopes," and the Kiowa name is a corruption from it. (2) Another name for the *T'ok'i'nähyup*, q. v.

-gyä—a locative suffix equivalent to "at" or "in." Cf. *gyä*-.

gyä—an assertive prefix with verbs and adjectives. Cf. *-gyä*.

gyä'ango'p—I kick.

gyäbo'nse—it stinks.

gyädä'mo—I make, I do. Cf. *ám*, *ámo*.

gyädo'—I have it. Cf. *gyät'o'* and *kyä'to'*.

gyä'gan—they brought it; I bring it, *gyä'ga'n*; they brought it, *gyä'gan* or *ä'gan*.

gyä'gu'ätäda'—I paint, draw, write, tattoo, make a picture; *gu'ätgya*, picture; *gu'ädäldä'*, it is painted, it is red.

Gyai'-kao'dal—"Comanche cache," from *Gyai'ko* and *kao'dal*; the vicinity of a spring in the mountains of northern Coahuila, Mexico, one day's journey south of the Rio Grande and probably one of the "tinajas;" a Comanche rendezvous in their raids into northeastern Mexico.

Gyai'ko—Comanche; "enemies;" singular, *Gyai'ki*, *Gyai'mä*, from *nyägyai'to*. This name "Enemies," is the common Kiowa name for the Comanche, now their close allies (see page 162 *et passim*). Other Kiowa names for them are (1) *Sänko*, now obsolete, probably signifying "snakes," from *sä'ne*, snake; (2) *P'o'dalk'i'ägo*, or *P'o'dalgyä'ko*, "reptile people," from *p'odal* and *k'i'ägo*. This last name is probably a substitute for the previous term *Sänko*, on the occasion of the death of some person of somewhat similar name. The early French explorers called them *Pa'douca*, from their common designation among the Dakota, Osage, and cognate tribes. It may possibly be derived from *Pe'nätē'ka*, the name of the easternmost division of the Comanche. SIGN: Wavy motion, as of a snake, made from front to back with the right forefinger. Cf. Shoshoni sign under *So'ndo'ta*.

Gyai'koaoñ'te—"He likes-(or rejoices in)-enemies," or "He-likes-the-Comanche" (the Kiowa name for Comanche signifies "enemy"—see preceding),

from *gyai'ko* and *coñ'ti*; a Kiowa warrior killed by the *Äläho'*, q. v., in 1854-55.

Gyai'-yä'daldä—"Comanche hill;" a hill at the head of Deer creek, a southern tributary of the South Canadian, in D county, Oklahoma.

Gyai'-yä'daldä p'a—Deer creek, in D county, Oklahoma; literally, "Comanche-hill river" (see preceding).

gyäk'a'ta—I bite, I bite off a piece; *gyä-zo'ñte*, I hold it with my teeth.

gyäk'i'ädä—they (it) sprouted. Cf. *ek'i'ädä*.

gyä'ko—see *k'i'ägo*.

gyäko'dal—they left them behind (implying rolled or wrapped up, said usually only of things to be rolled or packed up); *gyäko'da*, I leave it wrapped or rolled up; *do' gyäko'dal*, they left their tipis rolled up or packed away (the verb shows they were not left standing); *bä'ko'*, leave it there, put it there. Cf. *kao'dal* and *odal*.

gyäku'atda—I take it out (as from a box, pocket, or fastening). Cf. *K'u'ato*.

gyä'pa'bä—I bring him; he brought him, *pa'ga'ni*; he brought them, *e'pa'ga'ni*.

gyäpä'-imo—I tie. Cf. *ä'opän*.

gyäpa'-iñgya—dawn.

gyäpa'ta—it is sprouting. Cf. *gyäk'i'ädä* and *gyä'pa'to*.

gyä'pa'to—I eat. Cf. *piä* and *gyäpa'ta*.

gyäpä'to—I sharpen; *k'a-pä'ti*, whetstone; *K'a'-pä'top*, "knife-whetters," i. e., Apache.

gyä'pe'to—I am afraid, I am frightened; *pe'to'*, he is afraid; *gyäpe'to*, they are afraid; *e'pea*, they are afraid of him; *etpe'*, they were afraid.

gyätä'da—they were surrounded; we are surrounding him, *egi'ätä'da*. Cf. *gyä-tä'da*.

gyätä'da—I cut; root, in composition, *tä*, as *ä'-tä'*, sawmill; *so'n-tä'*, mowing machine.

gyät'o'—(it is) cold; I am cold, *äka'hem*. Cf. *gyädo'* and *kyä'to'*.

gyäze'mä—they (inanimate) move about; *to'yä*, it moves about; *äto'yä*, I move about.

gyu'ñhä'te—very (?) tall or long; an intensive form of *gyu'ñi*, q. v.

gyu'ñi—long. Cf. *gi'äni*, *gyu'ñhä'te*, and *kyu'ñi*.

haa'-ipai'-degi—O sun! But you, O sun! *pai*, sun. Cf. *hado'mga'gi* (see the song of the Kâitse'ñko, Summer 1871).

habä'—sloping, one-sided.

hado'mga'gi—O earth! But you, O earth! *dom*, earth. Cf. *haa'-ipai'degi* (see the song of the Kâitse'ñko, Summer 1871).

Hai'tsiki (Comanche)—see *Gaa'piatañ*.

Hänä'chä-thi'ak (Arapaho)—see *Pa'-ä'ngya*.

Hän'do'ti—"Iron-moccasin," from *hän'gya* and *doti*; the Kiowa name of an Apache signer of the treaty of 1837; called in the treaty "Hen-ton-te, the iron shoe."

hän'ngya—metal, particularly iron; in composition *hän*; iron or steel, *hän'ngya*; tin, *hän-t'aiñ*, "white metal;" lead, *hän'-ze'bat*, "arrow, i. e., bullet metal;" copper and brass, *hän-gu'ak'o*, "yellow metal;" gold, *ä'dalhä'ñ-gu'adal*, "red money," or "red hair metal" (see *ä'dalhä'ñgya*); silver, *ä'dalhä'ñ-t'aiñ*, "white money;" German silver, *hän-kope'dal*, "flat metal," because bought in sheets).

hän'-kope'dal—German silver; literally, "flat metal." Cf. *hän'ngya*.

hänpaiñ—gunpowder, literally "iron dust," from *hän'ngya* and *paiñ*.

Hän'paiñ p'a—"powder river;" Powder river in Montana and Wyoming.

hän-po—trap; literally, "iron trap," from *hän'ngya*, iron or steel; and *po*, a trap of any kind, including also a spider's web.

Hänpo'ko—see *Be'dalpa'go*.

hän-t'aiñ—tin; literally, "white metal;" sometimes improperly used for *ä'dalhä'ñ-t'aiñ*, silver.

Hän't'aiñ-k'a—"Tin-knife," from *hän-t'aiñ* and *k'a*; the Kiowa name of a Comanche warrior killed in 1860; sometimes improperly rendered "Silver-knife."

Hän'täk'i'a—"Spectacle-man," literally "Metal-eye-man," from *hän'ngya*, *tä*, and *k'ia*; Captain H. L. Scott, Seventh Cavalry, formerly commander of the Kiowa troop.

hän-t'o'gyä—cuirass; literally, "metal shirt;" sometimes also called *k'a-t'o'gyä*, "knife shirt."

Hän't'o'gyäk'i'a—see *A'pata'te*.

hântso—cannon ball; literally, “iron rock.”

Hântso p’a—“cannon-ball river;” a river in Kansas; so called on account of an abundance of iron nodules in its vicinity; a branch of Kansas river, probably the Solomon; perhaps the Republican river.

Hâ’ñzephô’da—“Kills-with-a-gun,” from *hâ’nze’pko* and *gyäho’taldä*. (Cf. *eho’tal*); a Kiowa warrior who died in 1863-64.

hâ’ñze’pko—gun; literally, “iron bow,” from *hâ’ñgya* and *zepko*.

HEIDSICK—see *Gaa’piatañ*.

hem—he died; I am dead (?), *ähe’m*; he is dead, *hem*; he will die, *hi’ñatä’* (a different word).

heñ—without, less, in composition. Cf. *Tso’dal-he’ñte*, *Toñheñ-t’a’ka’-i-dombe*; *he’ñgyäto’*, there is none; *heñ’yäto’*, I have none.

Heno’ñko—Hidatsa, Minitarí, or Gros-ventres of the Missouri; singular, *Heno’ñk’ia*, *Heno’ñmä*. The word, of which the root is *Heno’ñ*, has no meaning in the Kiowa language and may be derived from *Herantsa*, another form of Hidatsa. The name Minitarí is of Siouan origin, and signifies “water crossers,” or “water people.”

HEN-TON-TE—see *Hâñdo’ti*.

HE-PAN-NI-GAIS—“He-pan-ni-gais, the Night,” the name of a Kiowa signer of the treaty of 1837, as it appears on the treaty. The form seems to contain the word *pän*, cloud or sky.

hi’ädäl—a creek-like depression, or shallow valley, but without water.

Hi’ädäl-gyu’ñhä’té p’a—Devil or San Pedro river, Texas, joining the Rio Grande below the Pecos; literally, “long valley river.” Described as flowing with a noisy current and having very large fish. A war trail into Mexico crossed near there.

-hiñ—principal, real, a suffix; as *ä’hiñ*, cottonwood, literally “principal tree;” *gu’ato’hiñ*, eagle, literally “principal bird.”

hi’tugñ’!—wait!—abbreviated *hitü’!*

ho—the root of the verb *äho’ä*, “I travel;” *ho’an*, a road; *ho’gyä*, moving, to or from a destination; *hop*, emigrants; *tsä’hop*, immigrants.

ho’an—road, trail. Cf. *ho* and *hop*.

Ho’an-t’a’ka’-i—“white man’s road;” the main emigrant road, formerly running through southwestern Texas to California.

hodal or *ho’dälda*—sickness; I am sick, *äho’dalda*.

hop—emigrants; people moving off with their household goods, etc; *tsähop*, immigrants; people moving in this direction with their household goods. Cf. *ho*; *kotä’dalhop*.

Ho’tgyäsi’m p’a—Saline river (?), Kansas.

HOW—the universal Indian “yes,” or expression of assent, as commonly written by English authors. The Kiowa “yes” is *ho* or *há*.

HO-WE-AR—see *Howi’a*.

Howi’a (Comanche)—a Comanche signer of the treaty of 1867, whose name appears on the treaty as “Ho-we-ar, or Gap in the woods.”

i—child, offspring, in composition; it also conveys the idea of “small,” as *gu’ato’i*, small bird; plural *-yu’i*, as *Si’ndiyu’i*, *Ä’dalto’yu’i*. Cf. *e*.

Iâm guan—“Adoption dance,” from *i*, *âm*, and *guan*; an intertribal dance with a ceremonial adoption of children (see Winter 1889-90).

I’äpa—“Baby,” from *i’äpa’gya*; a Kiowa warrior in 1876-77.

i’äpa’gya—baby.

I’ätä k’op—“Ute mountain;” the Rocky mountains of Colorado and New Mexico, so called because occupied by the Ute. Cf. *I’ätä’go*. The Kiowa call the mountains about the heads of the Yellowstone and Missouri rivers *Gäi k’op*, “Kiowa mountains,” and the Sierra Madre of Mexico *K’ob-e’tä*, “Great mountain.”

I’ätä’go—Ute; from *Futa*, one form of the name used by the Ute to designate themselves; in the Kiowa word *go* is the tribal suffix. They are also sometimes called *K’opk’i’ägo*, “mountain people,” from *k’op* and *k’i’ägo*; and are probably identical with the *Ko’ñk’i’ägo*, “black people,” said by one informant to be the Crow. The ordinary name and sign for the Ute among most of the plains tribes denotes “black people;” the Kiowa usually designate

them by the sign for "mountain people," made by combining the signs for "climbing" and "man."

I'ätäk'i'a—"Ute-man," from *I'ätä* and *k'ia*; a Ute captive among the Kiowa, who died in 1892.

Ī'kūmo'să (Comanche)—see *Mā'nka-gu'a-dal*.

Ī'masä'mnot—"Grinner," from *ĩmto'-nomo*, "he grins;" the Kiowa name for agent George D. Day, 1891-93.

ĩmda'do'a'—they played the medicine *do'a'* game; from *da'-i* and *do'a'*. Cf. *do'a'*.

ĩmdo'hä'pa'—they attacked the camp; from *ĩmhä'pa'* and *do*, *dota*; I attack him, *gihä'pa'* (this form is used only in ridicule, as the word implies a general encounter); I attack them, *de-hä'pa'*; they (a few) attacked him or it, *ehä'pa'*; they (a large number) attacked him or it, *ĩmhä'pa'*; *sole'go'mhä'pa'*, the soldiers attacked them.

ĩmka'gyä'gya—they are coming in triumph, i. e., they are returning with scalps; from *ka'gyä*.

Īmki'a—see *Se't-ĩmki'a*.

ĩmk'o'daltä'—they cut off their heads; I am cutting off his head, *gyäk'o'daltä'dä'*; I have cut off his head, *gyäk'o'daltä'*; from *k'odal* and *tä*, the root of the verb "to cut"; *k'o'daltä'*, beheading; *o'tä'*, throat cutting, from *tä* and *osi*, throat (not neck); I am cutting his throat (but not cutting off his head), *gyäo'k'a-temä'*; I have cut his throat, *gyäo'k'a-te'm*.

ĩmto'nomo—he grins; said also of a dog showing his teeth.

i'ñhogo—now. Cf. *i'ñhoti*.

i'ñhoti—this. Cf. *i'ñhogo*.

I'sähä'bīt (Comanche)—"Wolf-lying-down;" a noted Comanche warrior, commonly known to the whites as Asahäbīt. His Kiowa name is *Gu'i-k'a'te*, q. v.

Ī'sänä'nākă (Comanche)—"Hears- or Understands-the-wolf;" a Comanche signer of the treaty of 1867, upon which his name appears as "Es-ananaca, or Wolf's name." Cf. *Tä'bi-nä'nākă*.

Ī'sätai (Comanche)—a Comanche medicine-man, instigator of the outbreak of 1874; still living. Commonly known to the whites as Asatai'.

iyu'gu'—maggot.

iyu'gu'-e—rice; literally, "maggot grains;" on account of a fancied resemblance.

Iyu'gu'a p'a—"maggot creek;" Traitor and Sweetwater creeks, in the panhandle of Texas, flowing into the North fork of Red river. Battey spells it *Yōū'-guoo-ō-poh'*, which he renders "rice creek" from a misconception of the word. The name originated from the circumstance of a hunting party having been compelled to throw away there a quantity of fly-blown meat. Cf. *Kato'de'ä p'a*.

Iyu'gu'a P'a Sole'go—Fort Elliott, between the two forks of the Sweetwater, Traitor creek and Battery creek, in the panhandle of Texas. The Kiowa name literally means "Maggot creek soldiers" (i. e., Soldier place). It is sometimes known as *Kato'de'ä P'a Sole'go*, from its vicinity to Battery creek, *Kato'de'ä p'a*, q. v.

ka—robe of skin, buffalo robe; *kata*, blanket.

k'a—(1) knife; *gyäk'a'go*, I cut; *gyäk'a'-tä'do*, I cut with a knife. (2) lying down; I am lying down, *äk'a'*; he is lying down, *k'ä*; lie down! *bemä'*!

Ka'äsä'nte—"Little-robe," from *ka*, *sän*, and *te*; a Kiowa warrior, still living.

ka'bodal—left-handed. Cf. *bodal* and *t'a-bodal*.

Ka'bo'dalte—"Left-hand;" the Kiowa name of the trader John Adkins, who, about 1863, was with William Allison in the trading house at the mouth of upper Walnut creek on the Arkansas, in Kansas. Cf. *Tso'dalhe'nte*.

K'adal p'a—Ree or Grand river, South Dakota; literally, "Biter, i. e., Ree, river." It is so called by most of the plains tribes from the fact that the Arikara formerly lived upon it. Cf. *K'a't'a*.

K'a'do'—medicine lodge, sun-dance lodge; the sun dance; perhaps "wall house or tipi," i. e., one built with sides or walls, as distinguished from the ordinary tipi, from *k'a'ga* and *do*. The *k'a'do'* or sun dance was the great annual religious ceremony of the tribe (see page 242).

k'a'do'-do'—"k'a'do' tipi," "sun-dance tipi;" the tipi in which the sun-dance

- priests made their preparations for each day's performance. It was erected behind the *k'ado* or medicine lodge (see plate LXX).
- K'a do'-gyä'to — Old-man-of-the-sun-dance;" a Kiowa chief in 1841 (see Winter 1841-42).
- K'a do' p'a—"sun-dance creek," "medicine lodge creek:" Kiowa Medicine-lodge creek, a southern tributary of the North Canadian at the one-hundredth meridian, Oklahoma. It was a favorite place for the ceremony on account of the abundance of suitable timber there. Not to be confounded with Kiowa creek just above it, or with Medicine-lodge creek in southern Kansas.
- ka'do liä—see *do go'tä*.
- Ka'do'liä p'a—Oak creek or Post-oak creek, a small southern tributary of the Washita, just above Rainy-mountain creek, on the north line of the reservation; formerly called *Do'go'tä' p'a*, both names signifying "oak creek," until changed on account of the death of a woman named *Do'go'tä'*, about six years ago.
- kadu* (Hidatsa)—a season, as measured by natural occurrences.
- k'a'ga—wall, side, bank of earth.
- Ka'giätse'—see *Poli'äkyä*.
- ka'gu'ät—bud, literally "red shell or rind," from *kañi* or *ka-i* and *guät* or *gu'ädal*.
- Ka'gu'ät P'a—"bud moon:" a Kiowa moon or month comprising parts of February and March.
- Ka'gu'ät P'a Sän—"little bud moon;" a Kiowa moon or month comprising parts of January and February.
- ka'gyä—a triumph or rejoicing over a slain enemy. Cf. *imka'gyä'gya*.
- KA-HIM-HI—"Ka-him-hi, the Prairie Dog," a Kiowa signer of the treaty of 1837, as his name appears on the treaty. The word for prairie-dog is *tsä*; for dog, *tse'ñhi*.
- ka-i—hide (noun) of buffalo, deer, etc, but not of panther, whose skin is generally used for quivers; *ka'-i*, skin of animals; *ka'gya*, human skin; *ka'ñi*, shell or rind.
- ka-igihä—compressed, flat; it is compressed. Cf. *ke pedal*.
- k'a'-iko'n—(1) flint; (2) the central cap of a cartridge.
- K'a'-ikon p'a—"flint creek," so called on account of the abundant flint rock there; a northern tributary of the South Canadian, about 10 miles above Adobe Walls, either Big Clear or Mustang creek, in the panhandle of Texas.
- ka'-ikonho'dal—dragonfly.
- Ka'-ikonho'dal—"Dragonfly;" a Kiowa boy frozen to death in the winter of 1890-91.
- ka'-itañ—see *k'i oñ*.
- Ka'-itâñ k'op—"Love-making mountain," a mountain in the angle formed by Elm fork and North fork of Red river, Greer county, Oklahoma; it takes its name from the neighboring spring of *K'ioñ toñ* or *Ka'-itâñ toñ*, q. v.
- Ka'-itâñ toñ—see *K'ioñ toñ*.
- Kâ'itse'ñk'ia—a member of the *Kâ'i-tseñ'ko*, q. v.
- Kâ'itse'ñko—the principal one of the six Kiowa military orders; the name seems to mean "Kiowa horses," from *Gâ-i* or *Kâ-i* and *tseñ*. Identical with the "horse" and "big horse," military orders of the Kiowa and Kiowa Apache, respectively, as given by Clark (see page 229 herein).
- kân—see *doti*.
- k'an—(1) Hard; cf. *got*. (2) Gripping, squeezing. (3) A small, red seed berry, growing on thorny bushes in rocky places, from Texas to the Arkansas and northward. It has flowers and is ripe in autumn and is eaten raw or mashed with pemmican. Perhaps the wild rose, which is thus eaten by the northern plains tribes. The name has now been transferred to the tomato. Cf. *k'a'nk'o'dal*.
- kâ'ñgya—name (noun), in composition *kâñ*; what is his(its) name, *hä tso'ká'ñ*. Cf. *Da'tekâñ*.
- Kânhe'ñko—see *Do'heñ ko*.
- kañi—shell, rind, skin (of fruit, etc; *do'ka'ñi*, bark. Cf. *ka'-i*.
- k'a nki'ñ—land tortoise or box turtle; literally, "hard shields," from *k'an* and *kiñ*, plural of *kyuñi*. The Indians eat them after roasting by throwing alive into the fire. Cf. *to'nak'a'*.
- K'a'nkîñ ton—"turtle spring;" a water hole on the Staked plain, in western Texas.
- k'a'n-k'o'dal—"neck, i.e. necklace, *k'an*;" the *Sophora erythrina* or coral bean,

called by the Mexicans *frijolillo* or *chilicote*: a hard red berry about the size of a small marble, used for necklaces by the southern plains tribes. The berries, contained in a pod, grow upon a small thorny tree found in Texas and the Sierra Madre of northern Mexico. They possess powerful poisonous or intoxicating properties. Cf. *k'an*.

K'a'nk'o'dal p'a—"coral-bean river;" a river somewhere southwest of Double mountain, Texas, in the vicinity of the old California emigrant road. So called on account of the *k'a'n-k'o'dal* (q. v.) bushes growing upon it.

Ka'ntsi (Caddo)—liars, deceivers; the Caddo name for the Kiowa Apache (see *Tagu'i* and Kiowa Apache synonymy).

K'añ'zole'go—a people, apparently a sub-tribe of the Apache, formerly known to the Kiowa and sometimes visiting them. The meaning of the word is doubtful.

ka'odal—a cache or deposit; *gyäka'o'dal-k'u'ätä'*, "I am about to leave them there." Cf. *odal* and *gyäko'dal*.

Kapä'te—"Knife-whetter, whetstone;" from *k'a*, *gyäpä'to*, and *te*; a Kiowa chief who died about 1890. Cf. *K'a-pä'ti'* and *Ka'-pä'top*.

k'a-pä'ti—whetstone; from *k'a* and *gyäpä'to*.

Kapä'to—Osage; literally, "shaved heads," in allusion to a custom, common to them and some neighboring tribes, of shaving all the hair from the head except a crest or tuft at the top. Catlin states that this custom was followed only by the Osage, Kaw, Sauk and Fox, Iowa, and Pawnee. I cut, *gyätä'da*; I shall cut your hair, *imk'a-pä'dältä*. Cf. *K'a'-pä'top*. The Osage are also sometimes called *Ä'daltä'do*, "cut-hair people," from *ädal* and *gyätä'dä*; also *Gusa'ko* and now more commonly *Wasa'si*, from their own name of *Washa'she* or Osage. Tebodal says that they were formerly called *Ähyäto* (q. v.) by the Kiowa, the name now given to the southern Arapaho, and that the name was changed on account of a death. SIGN: Brushing or clipping motion with the hand at the

side of the head, as though cutting off the hair.

K'apä'top—see *Tagu'i*. Cf. *K'apä'to*.

kata—blanket.

K'a't'a—(1) Ree, Arikara; literally, "biters," from *gyäk'a'ta*. (2) One of the six divisions of the Kiowa tribe, the Cut-off band of Clark, sometimes distinguished as *Gä'i-K'a't'a* or "Kiowa K'a't'a;" singular, *K'a'dalk'i'a*, *K'a'dalmä*. SIGN: Motion of biting off or twisting off something held in the mouth, originally referring to the gnawing of corn from a cob, the Arikara being noted for the cultivation of corn.

KATES-HO-KO-TUCK—see *Ki'tskûkatûk*.

kati—leggin. The Kiowa man's leggin is separate from the moccasin. The woman's leggin and moccasin form one piece.

Ka'to'de'ä p'a—Battery creek, the upper branch of Sweetwater creek, near Fort Elliott, in the panhandle of Texas. The name signifies "creek where the buffalo robe was returned," from *ka*, *tode*, and *p'a*. Cf. *Iyu'gu'a p'a*.

Ka'to'de'ä P'a Sole'go—see *Iyu'gu'a P'a Sole'go*.

k'a-t'o'gyä—see *hän-t'o'gyä*.

K'a-t'o'gyä—see *Ä'päta'te*.

k'ato'i—cut round across the forehead, from *gyäk'a'go* and *toi*.

kato'n—shoulder.

-*k'i*, -*k'ia*—man; suffix from *k'i'nähi'*.

kiä—day, an abbreviated form for *ki'adä*.

k'i'äbo—the "button" used in the *do'a'* game (see Winter 1881-82).

ki'adä—day, i. e., from sunrise to sunset; also *ki'aggyä*.

ki'ädä'—morning; literally, "full day."

ki'äde'dal—yesterday.

-*k'i'ägo*—people, a tribal suffix, sometimes shortened to *gyäko*; from *k'i'nähi*, plural *k'i'nähyup*.

ki'aggyä—see *ki'adä*.

ki'äsa'—noon.

ki'at'ä'—dawn.

KIDI-KI-TASHE—see *Do'gu'at*.

kigi'a—after (in time); *kigi'a Daki'adä*, next week; literally, "after Sunday."

kiñ—shield, in composition. It is really the plural form, as is usually the case in proper name compounds. Cf. *kyu'ñi*.

k'iñ'ähi—man; plural *k'iñähyup*. Cf. *k'i'ägo*.

K'i'nähi'ate—"Man;" a Kiowa warrior killed by Mexicans in 1836-37.

K'i'nähi-pi'äko—Tonkawa; literally, "man-eaters," from *k'i'nähi*, *piä* or *pi'ängya*, and *ko*; sometimes called *Ga'dalko'ko*, "buffalo spies," from *ga'dal*, *äko'ä*, and *ko*. The Tonkawa, originally from the lower Colorado, in Texas, noted and hated among other tribes for their cannibal practices, lived for a time at Anadarko, in the vicinity of the present Catholic mission and on Tonkawa creek, where they were surprised and nearly half their number massacred by a combination of neighboring tribes, October 25, 1862. SIGN: "Cannibal," made by combining the signs for *man* and *eating*.

Ki'nasä'hek'ia—see *Zonk'i'a*.

Ki'nep—"Big shields," from *kiñ*, plural of *kyuñi*, and *ep* a plural personal form of *et* or *edal*; one of the six recognized divisions of the Kiowa tribe, the "shield" band of Clark (see page 228).

Ki'nzi—see *Mä'ngomhe'nte*.

k'ioñ—love-making, courting; also *ka'-itän*; the first form seems to contain the root *k'i*, man.

K'i'oñ toñ—"Love-making spring," also sometimes called *Ka'-itän toñ*; a spring in a bend on the south side of the North fork of Red river, near Mount Walsh, in Greer county, Oklahoma; so called because in the old times when the Kiowa and Cheyenne used to camp on the opposite side of the stream, the women, as they crossed over to the spring for water, were followed by the young men bent on courting.

KIOWA—for *Gä'igwñ* (see Kiowa synonymy).

Kisi'nähis (Kichai)—see *Tagu'i*.

Kĩ'tikiti'sh (Wichita)—see *Dó'gu'at*.

Kĩ'tskúkatú'k (Wichita)—the Wichita village, formerly on the north bank of the North fork of Red river, about half way between Elm fork and Elm creek, on the reservation. The Wichita say the Kichai occupied it jointly with themselves. The name is rendered by a chief of the Wichita "villages on the side of a mountain," in his testimony in the Greer county

dispute, where it is spelled *Kats-ho-ko-tuck* (misprint *h* for *k*; see Summer 1834).

-ko, -go, -gua, -gwũ—a tribal suffix.

K'ob'-ä' p'a—"Mountain-timber creek;" San Francisco creek, a small tributary of the North Canadian, between Palo Duro and Beaver creeks, Oklahoma, so called because the principal timber upon it is of varieties usually growing only in the mountains.

K'o'b-aka'n—"last mountain," from *k'op* and *äka'n*; Mount Walsh, in Greer county, Oklahoma. Cf. *Tso'kaka'n*.

K'o'b-e'tä'-—"great mountains," from *k'op* and *edal*. (1) Mount Scott, northwest of Fort Sill, on the reservation. (2) The Sierra Madre of southern New Mexico and of Chihuahua and Sonora in Mexico. War parties of the Kiowa and allied tribes formerly made these mountains their headquarters for raiding upon the adjoining portions of Mexico.

K'ob-et'aiñ'mo—"white mountain," from *k'op* and *taiñ* (-*mo* makes it singular); a mountain westward from the head of Pecos river, New Mexico.

K'o'b-o'täbo—Mount Sheridan, northwest of Fort Sill, on the reservation. The name, suggested by the form of the mountain, denotes a mountain resembling a nose sticking out horizontally, from *k'op* and *o'täbo*.

k'odal—neck; the throat or tracheal portion is *o'si*, in composition *o*.

K'o'dal-aka'-i—(abbreviated, *K'o'la-ka'-i*): "Wrinkled-neck," a clerk of William Bent, who established trading posts on the South Canadian, in the panhandle of Texas, in 1844-1846.

K'o'dal-gu'ädal—"Red-neck;" Agent Captain J. Lee Hall, 1885-1887.

k'o'dali'ätoñ (or k'oli'äton)—a variety of musselshell used for gorgets or neck pendants, especially by the Osage; from *k'o'dal*. The Kiowa have no generic name for shell. A flint arrowhead worn as a neck pendant by Kiowa medicine-men is called *Bo'-se'se*, "Bo arrow," from *Bo*, a mythic dwarf, very strong.

K'o'dali'ätoñ p'a—(abbreviated, *K'oli'ätoñ p'a*); (North) Platte river; literally, "necklace-shell river," or

“gorget-shell river;” sometimes called *K'o dalpä p'a*, “necklace river,” and by misconception arising from its proximity to the Dakota *K'o'dalpä-k'i'a p'a*, “Sioux river.” According to Clark, the Indians generally call it shell, or shell-on-neck, river. The South Platte is called *Don p'a*, “Fat river.”

k'o'dalpä—necklace, gorget, breastplate; from *k'odal* and *pä*, the root of *gyäpä'-imo*.

K'o dalpä p'a or *K'o dalpäk'i a p'a*—see *K'o dali ätoñ p'a*.

K'o dalpä-k'i ägo—the Dakota; literally, “necklace people,” from *k'o'dalpä* and *k'i'ägo*. Probably a misconception of the tribal sign, made by drawing the hand with a sweeping pass in front of the throat, and commonly interpreted “Beheaders,” from a former tribal custom. “Beheaders” in Kiowa, would be *K'o'daltä-k'i'ägo*.

k'o'daltä—beheading (see *imk'o'daltä*).

K'o'daltä k'op—“beheading mountain;” a low mountain on the head of Otter creek, on the reservation, within two miles northwest from Saddle mountain (*Ta'-k'op*) and about 25 miles northwest from Fort Sill. The massacre from which it takes its name occurred on the west side (see Summer 1833).

ko'ga'-i—elk. Elk have been seen in the Wichita mountains within twenty-five years.

Ko'ga'-i p'a—“elk creek.” (1) Red-deer creek, a southern tributary of the South Canadian in the Texas panhandle. (2) Former name of Elk creek, now *Donä'i p'a*.

Ko'gu'i—“Elk,” an archaic or ceremonial form; one of the six recognized divisions of the Kiowa tribe, the “Elk” band of Clark (see page 228).

k'oli'ätoñ—abbreviated form of *k'o'dali'ätoñ*, q. v.

Kompabi'änta—“Big tipi flaps,” from *kompä'ka* and *bi'änta*; an old name sometimes used by the Kiowa for themselves, for which no satisfactory reason is assigned. Another form is *Kompä'go*, “tipi-flap people,” from *kompä'ka* and *go*.

Kompä'go—see *Kompabi'änta*.

kompä'ka—tipi flaps, at the top where smoke escapes; now *chimney*; plural, *ko'mpä'*.

komse—worn out, old; as an old worn-out tipi.

Komse ka-k'i nähyup—see *Ähyäto*.

Kontä'ga or *Komtä'-gun-da*—the tipi medicine and the pole to which it is tied (see *Gunpä'ñdamä*).

Koñabiñ'ate—“Black-tripe,” from *koñkya*, *abi'ñ*, and *te*; abbreviated *Koñ'ate*; a Kiowa warrior, hero of a noted adventure (see Summer 1857). Afterward called *Pa'-ta'dal*, q. v.

koñakān—one issue period of two weeks; literally, “end, or series, of nights,” from *koñkya* and *aka'n*. Cf. *koñtä'kia*.

Koñ'ate—see *Koñabiñ'ate*.

Koñ'-do'ha'—“black bluff,” from *koñkya* and *do'ha'*; a bluff in the vicinity of the head of Cimarron river, in southeastern Colorado or the adjoining part of New Mexico.

Koñ'k'i'ägo—see *I'ätä'go* and *Gaa'k'i'ägo*.

koñ (-kya)—black, dark, *one night* in time measure of journeys; in composition *koñ*. One night, two nights, etc, *pägo koñ*, *yí'a koñ*, etc; *koñ'kya*, black; *ko'ñkyädä'*, it is black; *ko'ñkyäoñ*, he is black (as a negro); *koñguat*, black paint.

Ko'ñkyäo'ñko or *Ko'ñkyäo'ñ-t'a'ka'-i*—“Negroes; literally, “black people,” or “people with black upon them,” from *koñkya*, *oñ*, and *-ko*; singular *Ko'ñkyäo'ñk'i'a*. Cf. *Gu'ädalo'ñte*. Also sometimes called *Ko'ñkyäo'ñ-t'a'ka'-i*, “black white men.”

Koñpä'te—“Blackens-himself,” or “Makes-himself-black,” from *koñkya*, black, *deko'ñpäka'*, I blacken myself; a Kiowa warrior killed by soldiers in 1871.

ko'nsenä'—turned up (?).

koñtä'kia—a week; literally, middle of (issue) nights; also *pä'go Daki'ada*, i. e., “one Sunday.” Cf. *ko'ñaka'n*.

Koñtä'lyui—“Black boys,” from *koñkya* and *t'älyi'*; one of the six recognized divisions of the Kiowa tribe; also called *Si'ndiyu'i*, “Sindi's children,” from *Sindi* and *i*; the “Black” band of Clark (see page 228).

Koñyä'daldä—“black hill,” from *koñkya* and *yä'daldä*; probably identical with the Blue hills in northern Kansas. Described as between *Pe p'a* (Smoky-hill river) and *Häñtso p'a* (Solomon fork?). (See Summers 1854 and 1860).

Koñyä'daldä p'a—"black-hill river;" a stream in the neighborhood of *Koñyä'daldä*, q. v., Kansas (see 1852).

KON-ZHON-TA-CO—see *Se't-ta'dal* (Apache).

kop—pain. I have pain, *nyäko'p*; sickness, *ho'dälda*; I am sick, *äho'dälda*.

k'op—mountain; before vowels it becomes *k'ob*. Cf. *yädaldä*, *ba'dlo'*.

K'op-pe p'a—"mountain-sand river;" North fork of Red river, Oklahoma. It is said to be called Nueces by the Mexicans.

kopa'-iñgya—middle, in the middle; abbreviated *pa'-iñgya*.

kope'dal—flat. Cf. *ka'-igihä'*.

K'o'pgya—"at the mountains," or "toward the mountains," from *k'op* and *-gyä*; vicinity of Fort Sill, on the reservation.

K'opk'i'ägo—see *I'ätä'go*.

K'o'p-sole'gya—see *Ts'o'ka'da'hä'gya*.

K'op-tagu'i—the Jicarilla Apache; literally "Mountain Apache;" cf. *Tagu'i*.

K'o'ptai'de-do'-tse'dalte—Signal mountain, west of Fort Sill, on the reservation; literally, "mountain with a house situated upon it," from *k'op*, *tai'-de*, *do'*, and *tse'dalte*. Also called *Pi'äya-do-tse'dalte*, "house upon the summit," from *pi'äya*, *do'*, and *tse'dalte*. Both names, as well as the English name, refer to the military lookout or signal station built upon it in 1871 and still remaining.

K'o'p-t'a'ka'-i—New Mexicans, sometimes used for Mexicans generally; literally, "mountain whites," from *k'op* and *t'a'ka'-i*. Cf. *Ä-t'a'ka'-i*, *Toñ'he'ñ-t'a'ka'-i*, *Tso'-t'a'ka'-i*.

K'o'p-t'a'ka'-i Do'mbe—New Mexico; literally, "Mountain Mexican country."

K'o'p-t'a'ka'-i p'a—Delaware creek, a south tributary of the Washita, on the reservation, about 4 miles below Anadarko; literally, "Mexican creek," because a number of Mexicans with Indian wives now live there. It probably had an older name.

kotä'dal—(or *kotä'l*); wheel; figuratively, a wagon.

kotä'dalhop—freighters; from *kotä'dal* and *hop*.

Kotä'dalhop-gi'atäda'e—"where they surrounded the freighters," from *kotä'dalhop* and *gyätä'dä*; the battlefield of

September 8, 1874, on the north side of the Washita, near Fort Elliott, in the Texas panhandle.

KOTS-A-TO-AH—"Kots-a-to-ah, The smoked shield," the name of a gigantic Kiowa warrior and runner, as given by Catlin, who painted his picture in 1834. The name or translation can not be identified in Kiowa. It appears to be a Comanche form containing the word *ko'tso*, buffalo. Horace P. Jones, interpreter at Fort Sill, is called by the Comanches *Ko'tso-natu'ä*, "Buffalo-calf."

Kotse'nto—see *Ä'bäho'ko*.

K'u'ato—a Kiowa division, speaking a peculiar dialect, exterminated by the Dakota about 1770 (see pages 157 and 229). The word signifies "pulling out" or "pulling up," as a knife from a pocket, a nail from a board, etc, from *gyäku'atda*.

k'udal—to stay or dwell; to be in a place. *kü'tiharu* (Pawnee)—a season (of the year).

Kwa'na—see *Gu'a'na*.

Kwu'da—"coming out," "going out;" an old name for the Kiowa tribe (see Kiowa synonymy).

kyähi'ñ(-aga)—tomorrow, abbreviated *kyähi'ñ*; *kyähi'ñ ki'äsa'*, shortly before noon.

kyai'guan—deer; literally, "jumper," from *dekyä'i'gu'anmo*, I jump; other names are *t'äp* and *tañ'gia*, q. v.

kyäka'n—after; literally, "at the end," from *aka'n*, q. v.; applied also to the final part of a song, etc; *Tä'dalkop Kyäka'n K'a'do'*, "sun dance after the smallpox;" *nyä'kyäka'n*, it is gone, i. e., it can not be helped.

kyä'to'—old man, plural *kyä'tadä'*. Since the recent death of a boy named *Kyä'to'* this word is not used, and they say instead *e'dalk'i'a*, plural *e'dalkyai'*; literally, "great man," from *edal* and *k'ia*. Cf. *gyät'o'* and *gyädo'*.

Kyät'tse'hä—"Short-old-man," from *kyä'to'*, *tse'*, and *hä* (?). (See the following.)

Kyät'tse'hä-de p'a—"Short-old-man's creek;" the extreme head of Cache (Bluff) creek, near Eagle-heart's place, on the reservation; so called from a man named *Kyät'tse'hä*, who formerly lived there.

kyuñi—shield; *kiñ* in plural and in composition. Cf. *gyuñi*.

lě tskukì (Pawnee)—autumn.

lì àt (Pawnee)—summer.

—*mä*—a feminine suffix, from *mä'ñyi'*; as *Semätmä*, "Apache woman," *tseñ'mä*, a mare.

Mä -ai -tai -i stsi -hì'nä' (Cheyenne)—see *A'päta'te*.

MAH-VIP-PAH (Apache)—see *Babi'pa*.

MAIZ—"Myers," Agent W. D. Myers, 1888-89.

mak'o'n—nose; in composition, *ma*.

Mamä'nte—"walking-above," otherwise known as *Dahä'te*, "medicine-man," from *dahä* and *te*; a Kiowa warrior in 1875, who died a prisoner in Florida. Cf. *Set'män'te*.

mändä'—arm; they sometimes say *tso'dal*, literally "wing;" *mānga' i*, lower arm; *mā'nte'm*, "arm bone," elbow.

mā'ngo'm—index finger, literally "pointing finger;" *mān*, root of finger, hand, arm.

Mān'gomhe'ñte—"No-index-finger;" the Kiowa name of General R. S. Mackenzie, commanding at Fort Sill in 1874; so called from his having lost his right (?) index finger. The same name was also applied to Thomas Caboon, a peace commissioner among the Kiowa in 1873. Battey spells the word *Mone-kome-haint*. Mackenzie was sometimes also called *Kñ'nzi*, a corruption of his proper name, and the same name is now given to a Mexican captive crippled in the same way.

Mānheñ'k'ia—see *Tso'dalhe'ñte*.

mānka—sleeve; from *mändä'*.

Mā'nka-gu'ādal—"Red-sleeve," the Kiowa name of a Comanche chief killed in Kansas in 1847. His Comanche name is said to have been *Ī'kāmō'sä*.

Mā'nka-gu'ādal-de p'a—Pawnee fork (see *Ai'koñ p'a*).

Mā'nka-gu'ādal-de P'a'gya Yä'pähe gi'adal-de'e'—"where the soldiers live on Red Sleeve's river;" Fort Larned, Kansas (see also *Aikoñ P'a Sole'go*).

Ma'ñkope'dal—"Flat-nose," from *mak'o'n* and *kopedal*; a Kiowa warrior and Florida prisoner in 1875.

MANRHOET or MANRHOUT—Kiowa? A tribe mentioned by La Salle in 1682

in connection with the Kiowa Apache (see pages 157 and 248).

ma'ñsä'—crow; the old name is *gaa'*. Cf. *mä'sä'*.

Mañ'taha'k'ia—"Hook-nose-man, High-nose-man, i. e., Roman-nose," from *mak'o'n*, *taha'*, and *k'ia*. (1) The Kiowa name of William Bent, the noted trader and proprietor of Bent's Fort. (2) Another name for William Madison, *Se'npō-ze'dalbe*, q. v.

mä'ñyi'—woman; in composition as a suffix, *mä*.

Mä'ñyi'-te'n—"Woman-heart;" a noted Kiowa chief about 1865-1875. On the treaty of 1867 his name appears as "*Ma-ye-tin*."

Ma'p'o'dal—"Split-nose," from *mak'o'n* and *p'o'dal*; the Kiowa name of a cattleman living in 1883 on the Washita above Rainy-mountain creek.

mä'sä'—six. Cf. *ma'ñsä'* (crow) and *pä'go*.

Mäsa'te—"Six;" a Kiowa young man in 1881, so called for having six toes on each foot. His brother, *Bo'he'*, q. v., is said to have six fingers on each hand. Ma'se'p—Caddo; literally, "pierced nose," from *mak'o'n* and *sep*. SIGN: Index finger pushed across below the nose, to indicate the former custom of boring the nose for pendants.

Masko'ki—Creek (Indians); an adoption of the name used by themselves.

Mäsu'ärä—Missouri; described by the Kiowa as friends of the Pawnee, but enemies of most other tribes.

mä'ta'n—girl; plural, *mäta'nta*.

Mä'wi (Comanche)—a Comanche chief in 1857.

MA-YE-TIN—see *Mä'ñyi'te'n*.

mayi'agyä'—cramp, cholera. Used alone the word denotes a sudden cramp, not necessarily a regular sickness or disease, but with the addition of the word for *sickness* it denotes the cholera, as *mayi'agyä' hodlo'mkya*, "he is sick with cramp," or "he has the cramp sickness," i. e., he has cholera. I am sick, *äho'dalda*; I have cramp, *ä'mayi'agyä'*.

MONE-KOME-HAINT—see *Mā'ngomhe'ñte*.

Mo'tsätse'—"Muchacho" (Spanish, *boy*); a Kiowa boy frozen to death in the winter of 1890-91; also the name of a Kiowa man still living. Both derive

- their Spanish names from the fact of being of Mexican captive origin.
- Mútsi'ānā-tāni'u* (Cheyenne)—the Cheyenne name for the Kiowa Apache (see *Tagu'i* and Kiowa Apache synonymy).
- Nadi'i'sha-de'na* (Apache)—see *Se'māt* and Kiowa Apache synonymy.
- Nah-tan* (Apache)—“Nah-tan, or Brave Man,” an Apache signer of the treaty of 1867, as the name appears on the treaty.
- Nakü'tävā hono* (Comanche)—Nueces river, Texas (see *Donä'i p'a*).
- Na'la'ni* (Navaho)—“many aliens or enemies;” the Navaho name for the Kiowa and allied tribes (see synonymy).
- Ni'chihinē'na* (Arapaho)—see Kiowa synonymy.
- Noko'ni* (Comanche)—a division of the Comanche.
- nyägyai'to*—I hate him.
- o'ba-ikā'*—you endure, you remain forever, you are always there. From the song of the *Kā'itse'ñko* (see Summer 1871).
- odal*—to carry, or a thing for carrying, as a box, bag, etc; *odal gyädäbo*, I carry a box or bag; *o'dalpä*, to carry a package (*pä*, to tie) of meat (on the saddle or back). Cf. *kao'dal* and *gyäko'dal*.
- O'homo'ñko*—see *O'moho'ñko*.
- o hyo*—there, then.
- O'moho'ñko* or *Omo'ñko*—Omaha; frequently transposed to *O'homo'ñko*.
- O'hom'oñ gu'an*, the “Omaha dance.”
- on*—measure, mile; *beo'n*, measure it.
- oñ'guä*—see *donä'i*.
- Oñ'guä p'a*—(1) another name for *Donä'i p'a* (Elk creek), q. v. (2) (North) Concho river(?), Chihuahua; “pecan river,” so called from the abundance of pecan trees on it. A trail led from it across to the Pecos.
- onhä'te*—bear. Cf. *set*.
- O'nhono'ñ p'a*—Little Washita river, on the reservation. This is the present Comanche name, which has been adopted by the Kiowa. They formerly called it *Pi'älai'bo-de p'a*, from *Pi'ärai'bo*, “Big-white-man,” the Comanche name of interpreter E. L. Clarke, who used to live upon it and from whom the Comanche called the river (*Pi'ärai'bo hono*).
- O'nhono'ñko*—The Comanche living about Little Washita river. Cf. *O'nhono'ñ p'a*.
- O'nhono'ñ-yä'daldä*—Kichai hills, on the reservation; “O'nhono'ñko hill.” Cf. *O'nhono'ñko*. Sometimes also called *Gañe'tä*, “there are hills.” They have no regular name, but the first is more common.
- o'päm-yai'po*—“initiation rope,” from *äo'pä* (see *äo'päñ*) and *yai'po*; the sash worn about the neck of a member of the *Kā'itse'ñko* (see Summer 1846).
- o'päñ*—initiation of the *Kā'itse'ñko*, from *äo'päñ* (see the preceding).
- ora'rēkaru* (Pawnee)—spring (season).
- o'täbo*—the word refers to (a nose?) “sticking up horizontally.” Cf. *K'o'b-o'täbo*.
- pa*—(1) buffalo bull; (2) a male suffix, as *tañgi'apa'*, buck deer; (3) fur, down, fuzz; plural or collective, *pa'dal*; downy, *pa'gi*, as *pa'gi-älo'*, “downy plum,” i. e., peach.
- pa'*—stupid, easy-going, quiet-tempered.
- p'a*—(1) moon or month; (2) river, creek, stream; the distinctive word for “creek” is *ase*, but it is seldom used.
- Pa p'a*—“Buffalo-bull creek;” (1) Buffalo creek, a southern tributary of the Cimarron, in Oklahoma; (2) a timberless stream, described as a small northern tributary(?) of the Cimarron, and apparently Bear creek or Two-butte creek, in southeastern Colorado.
- Pa'-ä'ngya*—“Sitting-bull,” from *pa* and *ä'ngya*; the Kiowa rendering of the name of *Hänä'chä-thi'ak*, “Sitting-bull,” the Arapaho apostle of the Ghost dance, who inaugurated that ceremony among the Kiowa in the fall of 1890.
- Pa'-ä'ti*—“Bull-entrails;” a Kiowa warrior and Florida prisoner in 1875.
- päbo*—(1) An American horse (as distinguished from the smaller Indian or Mexican variety); plural, *päbo'go*; the word literally indicates something unusually tall or long-limbed; Cf. *tseñ*. (2) A soldier's cap brim, a vizor.
- Päbo p'a*—see *To'ñzo'go'dal p'a*.
- Pä'bo-yä'daldä*—“American-horse hill;” a hill near the head of *Päbo p'a*, otherwise *To'ñzo'go'dal p'a*, q. v., in northwestern Texas.
- Pabo'n*—“fur crook,” from *pa* or *pa'gyä*, and *bon*; the crook lance of the *Toñ-*

- ko ūko* leaders; so called because wrapped with beaver fur.
- Päbo te—"American-horse;" a Kiowa chief about 1880, so called on account of his uncommon size (see *päbo*).
- Pa-con-ta—"Pa-con-ta, My Young Brother;" the name of a Kiowa signer of the treaty of 1837, as it appears on the treaty. "Brother" is *päbi*.
- pä'da-i—twin. Cf. *pä'tsoga*.
- Pä da-i—"Twin;" a Kiowa warrior and Florida prisoner in 1875; still living.
- Pa-do'gä-i—see *Doha'sän* (1).
- PA DOUCA—see *Gyāi'ko*.
- P'a E'dal—"great river;" (1) Rio Grande; (2) a great river beyond *K'o-b-e tā'* (the southern Rocky mountains), probably the Colorado of the west.
- P'a E'dal Sän—"little *P'a E'dal*;" Pecos river, New Mexico.
- P'a-Edal-T'a'ka'-i—"Rio Grande Mexicans;" the Mexicans along the Rio Grande, from about Laredo upward.
- P'a-edal-T'a'ka'-igya—"Great river white-man's place," from *P'a Edal*, *t'a'ka'-i*, and *gyä*; Fort McIntosh, on the lower Rio Grande, Texas; the Kiowa seldom went below or east of this point.
- Pa'-ehe'mgo'te—"Lame-bull;" special agent W. H. Abell, so called on account of his lameness and his rough manner.
- pä/go or pä'nyi'—one, solitary, alone. The first ten numerals are: *pä'go*, *yi'a*, *pä'o*, *yi'ä gyä*, *o'nto*, *mä'sä*, *pä'nse'*, *yä'se*, *ga'se*, *ga'kiñ*.
- Pa'-gu'ak'o—"Yellow-bull;" a Kiowa warrior mentioned in 1864 as having been a delegate to Washington (see page 177).
- pä/gun—to give by throwing away, as a sacrifice of scalps, etc.
- Pa'-guñhe'nte—"Hornless-bull," from *pa*, *guñ*, *heñ*, and *te*. (1) A Kiowa warrior in 1846. (2) Another, killed by the Ute in 1868.
- pa'gya—another form of *pa*, fur, q. v.
- Pä'gya—see *Päsi'ngyā*.
- pägyä—prairie, especially an extensive one, such as the Staked plain; another form is *pä gyä*.
- pähä'dal—forks of a stream; *pähä'dalgyä*, at the forks.
- pai—(1) Sun. (2) Abbreviated form of *pai'gya*, *pai'da*.
- Pai A'gân'ti—"Summer *Ä'gä'nti*;" a Kiowa moon or month, comprising parts of April and May.
- Pai Gañhi'ña P'a—"Summer *Gañhiñ'a P'a*;" a Kiowa moon or month, comprising parts of June and July.
- Pai Te'pğañ P'a—"Summer *Te'pğañ P'a*;" a Kiowa moon or month, comprising parts of May and June.
- pai'-ba'da—sunrise, from *pai* and *badai'*; *pai'-ba'te dé pe'bä*, "in the direction of the sunrise," i. e., east.
- pai'da—see *pai'gya*.
- pai'gya—summer; abbreviated *pai*; a plural form, *pai'da*, is also sometimes used.
- Pai'-k'op Toñ'tep—"sun-mountain spring;" a noted spring and Indian rendezvous upon a mountain or mesa, about the southern border of the Staked plain. Cf. the following (see Summer 1857).
- Pai toñ—"sun spring;" a well spring in the Staked plain, Texas, a journey of about a day and a half southwest from Double mountain, and flowing eastward. So called because the basin is a round hole in the rock. Cf. the preceding.
- paiñ—dust, earth, dusty; it is dusty, *gyä-pai'ñyum*.
- Paiñ-do' p'a—"earth-house river;" a stream southwest from Double mountain, Texas; so called from an adobe house upon it. Cf. *Tso'paiñ Do'*.
- Pa'-iñgya—"In-the-middle," from *kopa'-iñgya*; a Kiowa prophet in 1888.
- pai'nyoñhä'—dusty. Cf. *paiñ*.
- Pai'-tälyi'—"Sun-boy." (1) A Kiowa chief who died in 1888; the name is sometimes rendered "Son of the Sun," or "Sun's Son," and may refer to (2) the Sun-boy hero, from whom is derived the *Ä'dalbea'hya*, q. v.
- pa'ki—thigh.
- Pa'k'iägo—Sarsi; literally, "stupid people," from *pa'* and *ki'ägo*; other possible etymologies are "thigh people," from *paki*; or from *Päki* or *I'äki'äni*, the Shoshoni name for the Blackfeet, which in turn may be derived from *Pikü'nñ*, the proper name of the Piegan, one of the Blackfoot divisions. The Sarsi are a small tribe of Athapaskan stock, which separated about a hundred years ago from the parent tribe, the Beaver, on Peace river, British Amer-

ica, and moved southward, establishing themselves on the headwaters of the North Saskatchewan, near Battleford, about 53° north, under the protection of the Blackfeet. They are the northernmost tribe known to the Kiowa, who remember them as allied to the Blackfeet and as speaking an Apache dialect. Several prominent Kiowa are of Sarsi descent by former intermarriage. SIGN: Touching the thigh in a sweeping pass with the open right hand.

Paki-gu'ādalkantä'—Brulé Sioux; "red-burnt thighs," from *paki*, *gu'ādal*, and *tsenka'n*. SIGN: Same as for *Pa'k'ia'go*, followed by sign for Sioux (*K'o'dal-päk'i'ägo*).

Pa'-ko'ñkya—"Black-bull," a Kiowa warrior in 1873.

Palä'ni—see *Kat'a*.

Päli—"Valdez" (?), a Mexican captive and Florida prisoner in 1875; still living.

pä'ngun or pä'ngyā—a sacrificial offering, or offering "thrown away" upon a hill to the sun; from *päñ*, the root of the verb "to give," and *gun*, the root of the verb "to throw away." I am sacrificing, *gyäpä'amda'*; I have sacrificed, *gyäpä'oñ* or *gyäpä'gun*; *gyäda'-tsaiä'mo*, I make or prepare a ceremonial other than sacrifice, as *K'a'do'* or *Dä'-mä'tan-da'-i*.

Päñ'gyägi'ate—"Sacrifice-man," from *päñgyä* and *te*; a Kiowa warrior killed in Mexico in 1853-54.

Pao'ngya—autumn; the name refers to the thickening of the fur (*pa*) of the buffalo; also called *Ai'deñ-gyāgu'ādal-o'mgyä-i*, time "when the leaves are red," from *ai'deñ* and *gu'ādal*.

Päre'iyä (Comanche)—see *To'npe'to*.

Päriäse'amän (Comanche)—"Ten-elks;" a Comanche signer of the treaty of 1867, upon which the name appears as "Parry-wah-say-men or Ten Bears."

Parry-wah-say-men (Comanche)—see *Päriäse'amän*.

Päsä'ngyā—The Staked plain, of Texas and New Mexico; literally, "prairie edge," or "prairie bluff," from *pä'gyä*, and *sä'ngya*. The name properly refers only to the bluff edge or escarpment of the Staked plain, which itself is com-

monly referred to simply as *Pägyä* or *Päya*. "The prairie."

pa'sot—thunder. According to the belief of the Kiowa and the plains tribes generally, thunder is produced by a large bird resembling the eagle.

Pa'sot-kyä'to'—General W. S. Hancock, present at the treaty of 1867; literally, "Old-man-of-the-thunder," from *pa'sot* and *kyä'to'*; so called on account of the eagles upon his shoulder straps, emblematic of his rank, which were thought by the Indians to symbolize the thunder bird. The Kiowa say that he was called by the whites *Ga'nu'än* (General?).

Pä'suñko or Pä'suñ-T'a'ka'-i—Mexicans about El Paso on the Rio Grande; from the Spanish *Paseños*.

pät, pätdo'—having low spreading branches; from *pät*, an archaic word for low spreading branches, and *-do* or *-dä'*, a suffix implying having, it has, or there is, from *gyädo'*.

Pa'-ta'dal—"Lean-bull;" (1) see *Koñ'a-biñ'ate*. (2) A Kiowa war chief in 1874-75, still living. He is commonly known to the whites as "Poor-buffalo," and in the last outbreak gained the name of *Ta'-tätheñ'te*, "Never-unsaddled" (from *ta'gyä*, *tät?*, *heñ*, and *te*), from his practice of keeping his horse saddled at night, to be always ready for surprise.

Pa'te'pte—see *Da'tekän*.

Pa'to'—see *T'enc'taide*.

Pa'-to'n—"Bull-tail;" a Kiowa warrior killed by the Mexicans in 1834-35.

pätsä't—end, top; as *ä'-pätsä't*, *k'o'p-pätsä't*, *ä'dal-pätsä't*, *p'a-pätsä't*.

pä'tsoga—similar, looking alike. Cf. *pä'da-i*.

Pätso'ga'te—"Looking-alike;" a daughter of Stumbling-bear noted for her beauty. She died in 1882.

Pä'ya—see *pä'gyä* and *Päsä'ngyä*.

pe—sand.

Pe p'a—"sand river;" Smoky-hill river, Kansas.

Pe p'a edal—"great sand river;" Red river (of Texas and Indian Territory), so called both above and below the North fork.

Pe toñ—"sand spring;" a water hole on the Staked plain, in Texas or New Mexico.

p'e'gyä—they fell; *p'e'gya*, it is falling (as rain, snow, or shower of meteors); *t'o dal p'e daldä to*, it is snowing.

peñ—turkey; plural *peñ'ko*; *peñ sän*, quail, i. e., “little turkey.”

Peñ p'a—“turkey creek.” (1) A small southwestern branch of Elk creek (of North fork), in H county, Oklahoma; (2) a southern tributary of North fork of Red river, in Greer county, Oklahoma, beyond Mount Walsh.

penä—sugar, candy; it is the same in the Comanche language, from which the Kiowa may have adopted it.

Penä p'a—“sugar creek;” sugar creek on Wichita reservation; sometimes also called *Do'gu'at p'a*, “Wichita creek.”

Pe nütö'ka (Comanche)—see *Ä'-gyai'ko*.

pep—bush, tree; see also *ä*; *gyäpe'boñ*, it is bushy or thickety.

Peyi—“Sand-child,” from *pe* and *i*; a young Kiowa man who committed suicide in 1886-87.

piä—fire. Cf. *piä*.

piä—eating; food, *pi'äñgya*; I eat, *gyä'pa'to*. Cf. *piä*, *gyäpa'ta*, and *gyäpä'to*.

Piä-ki'adä—Christmas; literally, “eating day.”

Pi alai'bo—see *Pi'ärai'bo*.

Pi alai'bo-de p'a—see *O'nhon'oñ p'a*.

Pi'änä'vonit (Comanche)—“Big-looking-glass;” a Comanche chief and delegate to Washington in 1892.

Pi'arai'bo (Comanche)—“Big-white-man,” from *piäp*, big, and *taivo*, a white man; the Comanche name of interpreter E. L. Clarke, corrupted by the Kiowa to *Pi'alai'bo*.

pi'äta'nga—see *guñse'to*.

pi'äya—summit, top.

Pi'äya-do'-tse'dalte—see *K'o'p-tai'-do'-tse'-dalte*.

pi'ciküt (Pawnee)—winter.

pi'ho'—peninsula, bend in a river or coast.

Pi ho'—“peninsula;” a bend in the Washita a short distance below Walnut creek and the Wichita line. A favorite place for the Sun dance. See Summers 1839 and 1885.

Pi'semä'i—see *T'a'ka'-i-p'o'dal*.

po—trap; spider web. Cf. *p'o*.

p'o—beaver. Cf. *po*.

P'o p'a—“beaver river;” (1) North Canadian river and its upper branch, Beaver creek, in Oklahoma; (2) Otter creek, branch of North fork, on the reservation; (3) Beaver creek, east of Fort Sill, on the reservation.

P'o p'a sän—“little beaver creek,” Little Beaver creek, east of Fort Sill, on the reservation.

Po'bäro—see *Te'guägo*.

p'odal (plural, *p'o'tä'*)—worm, reptile, insect, snake; used for both creeping and flying insects, including flies, and occasionally for snakes, but not for turtles. For many insects they have no specific name.

P'o'dal-ä'dalte—see *Zoñ'tam*.

P'o'dalä'nte—“Coming-snake,” from *p'odal*, *ää*, and *te*; a Kiowa warrior killed in Greer county, Oklahoma, in 1891. Abbreviated *P'olä'nte*.

P'o'dalk'i'ägo or P'o'dalgyä'ko—see *Gyai'ko*.

p'o'dal(-tä)—spoiled, useless, deformed, split, as *Ma'-p'o'dal*, “split-nose.”

po'dodal—a variety of bird.

Po'dodal(-te')—a Kiowa warrior in 1879-80.

Poho'me—The Kiowa name of John Smith, a noted trader about 1860-1867, and Government interpreter for the Cheyenne, who called him *Po'omúts*, “Gray-blanket,” or “Saddle-blanket,” whence his Kiowa name.

poho'n-ä—walnut tree; *poho'n-e*, a walnut. A woman with her nose cut off, the former punishment for adultery, is called *poho'nmä*, plural *poho'nma'imo*, from the fancied resemblance of the mutilated nose to a split walnut. A man so disfigured would be called *k'i'ñähyum*.

Poho'n-ä p'a—“walnut creek;” Scout's creek, a tributary of North fork, near Fort Elliott, in the Texas panhandle.

P'oläñ'te—see *P'o'dalä'nte*.

poläñ'yi—rabbit; plural, *polä'nyup*; evidently connected with *poli'äkyä*, q. v., a pet name is *tsä'nyü*, plural, *tsä'nyui*.

Polä'nyü-kato'n—“Rabbit-shoulder;” a Kiowa calendar keeper, now dead.

Polä'nyup—“Rabbits;” the lowest order of the Kiowa military organization; sometimes called *Tsä'nyui*, another word for “rabbits.”

poli äkya—hare lip, split lip; *Zo'n-poli'-äkyä*, a vacant place from which a tooth has been lost. Cf. *polä'ñyi*.

Poli'äkyä—"Hare-lip;" alias *Ka'giätse'*, "Thick-blanket," from *kata* and *etse'* (?); the chief of the Kiowa at the time of the first alliance with the Comanche.

Pooh-yah-to-yeh-be (Comanche)—see *Pu'iwito'yäbi*.

Po'omüts (Cheyenne)—see *Poho'me*.

Po'-Sĩ'l—See *Tso'kadahä'gya*.

po'to' or po'tä'—a prong or branch; *ä'po'to'*, a forked pole, especially of the medicine lodge; a table fork is called *gi'ä-tsoñ'i*, "meat awl."

Pu'iwito'yäbi (Comanche)—"Iron-mountain;" a Comanche signer of the treaty of 1867, where the name appears as "Pooh-yah-to-yeh-be."

Quay-ham-kay—"Quay-ham-kay, The Stone Shell;" the name of a Kiowa warrior painted by Catlin in 1834, as given by the artist. It can not be identified. Cf. *k'o'dali'ätoñ*.

sa'bä—stingy.

Sa'bä'—see *Do'ho'n*.

sabiñ'a—quiver; sometimes called *ä'go-bi'ĩmkä'-i*, "feather case." The quiver is made of panther skin, or of Mexican leather, never of deer or antelope skin.

sa'dal—(1) masticated food in the stomach, whence also *intestine*, *belly* (see also *äti*); (2) having, furnished with, in composition. Cf. *Guñsa'dalte*.

sä'dalgu'ät—sweat-house, from *sä'dal-tep*.

sa'dalka'ñi—the manifold or stomach-rind of a buffalo or cow, from *sadal* and *kañi*.

Sa'dalka'ñi k'op—"manifold mountain;" the Black hills, South Dakota.

sa'dälsomte—weasel; literally, "belly rubber, or dragger," from *sadal* and *somta*.

Sa'dälsomte-k'i'ägo—see *Semät*.

sä'daltep—sweat (noun).

SAD-DY-YO—see *Sü'riyo*.

sä'he—blue, green; *sä'he-ko'ñkya*, dark blue.

sai or saigya—winter, year; plural, *säta* (see page 366).

SAITKOPETA, PAUL—see *Se'tk'o'pte*.

Säki'bo(-go)—Sauks, from their proper name, *Oñsa'ki* or *Saki*.

Sä'k'odal Gu'ädal Do'ha'—"Cheyenne red bluff;" the Red hills on the North Canadian above Fort Reno, Oklahoma. Cf. *Gu'ädal Do'ha'*.

sa'kon—buffalo chips; *sa'gya*, dung.

Sa'kon-yä'daldä or Sä-yä'daldä—"buffalo-chip hill;" a hill or mountain near Salt fork or White-river fork of Brazos river in Texas (see *Ahiñä p'a*).

Sa'kon-yä'daldä p'a—"buffalo-chip-hill river;" Duck creek, a branch of Salt fork or White-river fork of Brazos river, Texas; also called *Ahiñ'a p'a*, "cedar creek."

sä-kop—midwinter, from *sai* and *kopa'-iñgya*.

Sä'kop p'a—see *Ä'gä'nti*.

Sä'k'ota—Cheyenne; singular, Sä'k'odal, etymology doubtful. Also called *T'a'-sep*, "pierced-ear," or *Ä-gu'at*, "painted feathers," from the fact that for their arrows they always used wild-turkey feathers, which are transversely striped. Their Comanche name, *Pä'-ganä'ro*, denotes "striped arrows," and the tribal sign, made by drawing the right index finger across the left, seems to convey the same idea.

Sä'k'ota-ä'oto'n-de p'a—"creek where the Cheyenne were massacred;" a northern tributary of North fork of Red river, the second below Sweetwater creek, in F county, Oklahoma; so called from a massacre there in 1837, q. v.

sä'lä'ti—hot, from *gyäsä'dal*, it is hot.

sän—little; an archaic form, in composition, is *t'an*, q. v.

sä'ne'—snake; *sä'ne'hiñ*, rattlesnake, literally, "principal snake."

Sä'ne' p'a—"snake creek;" Deep creek, entering Cache creek, south of Fort Sill, on the reservation.

sä'ngya—an overhanging bluff or escarpment. Cf. *Päsängyä*.

Sä'ngo—see *Gyäl'ko*.

sa'omhäpä—blood came up from him, i. e., he had a hemorrhage; *om*, a drop of blood; *oñkya*, blood.

SA-PA-GA—see *Se'tpä'go*.

sa'pän—ashes.

sa'podal—a mythic cannibal monster; hence also, from its human expression, an owl, properly *mahi'ñ*.

Sa'podal-ä'daltoñ p'a—"owl-head creek,"

a western branch of *ĭ dan p'a*, q. v.; so called from the figures of two owls cut upon a tree where the trail crosses.

Sä'riyo (Comanche)—“Dog-fat;” a Comanche signer of the treaty of 1867, where his name appears as “Sad-dy-yo,” the Comanche *r* sometimes approximating *d*.

säta—plural of *sai*, *sai'gya*, q. v.

SA-TA-MORE—see *Se't-emä'i*.

SATANA—see *Set-t'a'ĩnte*.

SATANK—see *Set-ä'ngya*.

SA-TAN-TA—see *Set-t'a'ĩnte*.

SATEKOPETA, PAUL—see *Set-k'o'pte*.

SA-TIM-GEAR—see *Se't-ĩmki'a*.

sa'top—pipe.

Sa'wāno—Shawano, Shawnee.

SEE-TI-TOH—see *Set-t'ai'ĩnte*.

se'hän—horned toad.

sek'a'n—dogwood (*Cornus asperifolia*), used by the southern plains tribes for arrows, but not for bows.

Sek'a n p'a—“dogwood creek;” a small southern tributary of South Canadian river in the panhandle of Texas, a short distance below Adobe Walls; perhaps Chicken creek.

Se'mät—Kiowa Apache; literally, “Thieves” (singular, dual, and plural alike). Cf. *Ā'semtse*. They have been so called for the last twelve years on account of having stolen and killed the cattle and hogs of the Kiowa. Formerly called *Tagu'i*, the generic Kiowa name for the tribes of Apache stock; also *Sa'dälso'mte-k'i'ägo*, “weasel people” (see Kiowa Apache synonymy).

Semät p'a—“Apache creek;” an upper branch of Cache creek, joining with *E'gu'a p'a* (Chandler creek), on the reservation; so called because the Kiowa Apache reside chiefly upon it.

Se'mätmä—“Apache-woman;” a Kiowa woman in the Osage massacre of 1833. Her proper name was probably *Tagu'imä*, as the Apache were then called *Tagu'i*.

sen—nostril.

señ—prickly.

Señ p'a—“cactus river;” Salado river, Nuevo Leon, Mexico. The name refers to the tall upright cactus (*Cereus giganteus*), not to the prickly pear (*Opuntia*). The Kiowa say there are salt beds on its lower course.

señ-ä—willow.

Señ-ä p'a—(1) “willow creek;” a northern tributary of the Washita, about four miles below Sugar creek, Wichita reservation. (2) Sabinas river, a tributary of Salado river, Nuevo Leon, Mexico. (3) A northern tributary of Beaver creek, a short distance above the junction of the Palo Duro, Oklahoma.

señ'-älo'—the prickly pear (*Opuntia tortispina?*), literally “prickly plum,” from *señ* and *älo'*. Eaten raw by the Indians.

Se'ñ-älo' k'op—“prickly-pear mountain,” a low rocky hill near Stumbling-bear's camp on the road to Fort Sill; so called from the abundance of prickly pears upon it.

Se'ñ-älo' p'a—“prickly-pear creek;” a creek near Bent's fort in Colorado, perhaps Caddo or Rate creek (see Summer 1856).

se'ñi—cactus, especially the peyote (*Lophophora*), eaten with religious ceremonial; literally, “prickly fruit,” from *señ* and *i*; in composition, *señ*.

se'npa'ga—mustache; cf. *se'npo*.

se'npo—mustache, beard; plural *se'npa'ga*, from *sen*, nostril, and *paga*, down, fur, fuzz; *pa'da*, a single hair of fur or fuzz, pubis, beard, etc; *a'da'*, a single hair of head, eyelash, of horse, cow, etc. Cf. *Be'dalpa'go*.

se'np'odal-e' (or *se'np'ole'*)—a water bulb, apparently the water lily, growing in Swan lake and other ponds on the Wichita reservation; eaten by the Indians.

Se'np'odal-e' p'a—“water-lily creek” (?). Pond creek, a northern tributary of the Washita, on the Wichita reservation.

Se'np'odal-e' setso'—“water-lily pond” (?). Swan lake, on the Wichita reservation.

Se'npo-gu'ädal—“Red-beard;” J. M. Haworth, Kiowa agent, 1873-1878; Battey writes it *Simpoquodle*.

Se'npo-ze'dälbe—“Terrible-beard.” (1) William Madison or Matthewson, a former trader among the Kiowa. About the year 1865 he had a trading house at the Santa Fé crossing of Cow creek in Kansas, from which he moved when the Kiowa were put upon the

- reservation in 1869, and established a house on the west side of Cache creek, 2½ miles below Fort Sill, on the reservation, where he remained until about 1876. His place on Cache creek was about on the site formerly occupied by *Tomete*, q. v. It is said he was sometimes known as *Ma'ñtaha'k'ia*, q. v. (2) Timothy Peet, trading clerk at Anadarko; the name was transferred to him from Madison.
- SEN-SON-DA-CAT—"Sen-son-da-cat, the White Bird; a Kiowa signer of the treaty of 1837, as the name appears on the treaty. It can not be identified; "White-bird" would be *T'ene-t'ai'ñte*.
- sep—(1) rain; *sepdo*, it is raining. (2) The root of the verb "to pierce" or "to sew."
- Se pyä'daldä—"rainy mountain," from *sep* and *yä'daldä*; Rainy mountain, on the reservation, about 30 miles west of Anadarko.
- Se pyä'daldä p'a—"rainy-mountain creek;" the western branch of Rainy-mountain creek, a southern tributary of Washita river near Rainy mountain. The eastern branch is called *Tsodo'm p'a*, q. v., and the main stream below the junction is called *Tsen p'a*.
- Se'se—arrowhead; when made of stone, it is sometimes distinguished as *k'a'-ikon sese*.
- Se se p'a—"arrowhead river;" Arkansas river, the most prominent river in Kiowa narrative. According to Clark it is known as Flint (i. e., flint arrowhead) river among the plains tribes generally.
- Se se p'a hoan—"Arkansas river road;" the Santa Fé trail.
- set—bear; an archaic word used now only in composition, especially in proper names. The ordinary word is *onhä'te*.
- se tä—the small intestine of the buffalo or cow.
- Setä—"Cow-intestines;" a school boy frozen to death in the winter of 1890-91, probably the "Sailor" of Scott's report on the subject.
- Se t-ä gyai—"Bear-on-tree," from *set* and *ä*; a Kiowa warrior killed by the Pawnee in 1851.
- Se t-ä ngya—"Sitting bear." (1) A noted Kiowa war chief, commonly known as Satank, killed at Fort Sill in 1871. (2) A son of the above, killed in Texas about a year before.
- Se't-daya'-ite—"Many-bears," from *set*, *da*, *a-i*, and *te*. (1) A Kiowa warrior, known to the whites as Heap-of-Bears, killed by the Ute in 1868. (2) A keeper of the *taíme*, 1876-1883.
- Se't-emä'-i—"Bear-lying-down" (habitually); cf. *k'a* (2). A Kiowa signer of the treaty of 1867, where his name appears as Sa-ta-more.
- Set-ñmki'a—"Pushing-bear," from *set* and *deki'a*; a noted Kiowa war chief, still living, one of the signers of the treaty of 1867, where his name appears as "Sa-tim-gear, or Stumbling Bear." His name is commonly abbreviated to *ñmki'a*, while to the whites he is known as Stumbling-bear, a mistranslation of his proper name, which indicates a bear that overthrows or pushes over everything in his way.
- Se't-k'o'dalte—see *ñ'taha-ik'i*.
- Se't-k'o'pte (Paul)—"Mountain-bear;" a Kiowa warrior and Florida prisoner in 1875; as a boy he was called "Buffalo-horns." At the close of his imprisonment he was adopted into a white family under the name of Paul Saitkopeta Carruthers. He returned to his tribe in 1882 and is still living.
- Se't-mä'nte—"Bear-above" (Sky-bear). The Kiowa name of a Kiowa Apache signer of the treaty of 1837, in which it appears as "Cet-ma-ni-ta, the Walking Bear." A Kiowa warrior and Florida prisoner in 1875. Cf. *Mamä'nte*.
- Set-pä'go—"Lone-bear;" a Kiowa signer of the treaty of 1867, in which the name appears as "Sit-par-ga, or Sa-pa-ga, One Bear."
- Set-pa'te—"He-bear;" a Kiowa warrior about 1854 (see Winter 1854-55).
- setse yu—hog; literally, "domestic bear," from *set* and *tseyu*.
- Setse yu p'a—"hog creek;" Hog creek, a southern tributary of the Washita, about eight miles above Anadarko, on the reservation. So called on account of the former presence there of wild hogs which had escaped from the Caddo north of the river.
- setso—lake, pond.
- Setso—"lake;" Swan lake, Wichita res-

ervation. Being the only lake in the region, it is simply called "the lake." Setso' edal—"big lake;" a large lake in Coahuila or Chihuahua, Mexico, described as having an island upon which was a Mexican fort.

Se't-ta'dal—"Lean-bear." (1) A Kiowa (?) warrior in 1864-65. (2) A Kiowa Apache chief and signer of the treaty of 1867, being then the head chief of the tribe. His proper Apache name was *Gu'ānteka'na*, of which Se't-ta'dal is the Kiowa rendering. It appears on the treaty as "Kon-zhon-ta-co, Poor Bear." He was the father of White-man, present head chief of the Apache.

Se't-t'a'īnte—"White-bear;" a noted Kiowa chief and signer of the treaty of 1867, who committed suicide in prison in 1878. He was commonly known as Satanta; other forms are Satana and See-ti-toh. In boyhood he was called *Gu'atoñ-biān*, "Big-ribs," and since the death, in 1894, of his son, who inherited the father's name, this last name only is used in referring to him.

Set-t'ai'nte-T'a'ka'-imai'mo-e'paga'ni-de p'a—"river where Set-t'ai'nte brought the white women;" Satanta creek, alias North or Kiowa creek, a northern tributary of Cimarron river in Comanche county, Kansas; so called because Set-t'ai'nte brought there some white women and children captured in Texas about thirty years ago. Doha'sän died at its junction with the Cimarron.

Se't-t'an—"Little-bear;" a Kiowa warrior and author of the principal calendar here published.

Shi'shinnu'wut-tsi'täni'u (Cheyenne)—the Comanche (see Kiowa synonymy).

Si'äch'i'nika (Comanche)—"Standing-head-feather;" a Comanche signer of the treaty of 1867, where the name appears as "Cear-chi-neka."

SIMPOQUODLE—see *Se'npo-gu'ädal*.

Sindi—a mythic trickster and wonder-worker of the Kiowa.

Si'ndiyu'i—see *Koñtä'lyui*.

SIT-PAR-GA—see *Se'tpä'go*.

so'le—see *Yä'pähe'*.

So'le p'a—"soldier creek;" Cache creek, near Fort Sill, on the reservation. Sometimes called *Tso'kada'hä So'le p'a*, "Medicine-bluff Soldier creek."

somta—rubbing; *gyäso'nmo*, I whet; *deso'nmo*, I rub myself; *dega'mo*, I anoint. son—grass.

So'ndo'ta—Shoshoni; literally, "grass houses," from *son* and *do'*, said to refer to a former custom of weaving tipis or wikiups of rushes; also called *So'soni*. TRIBAL SIGN: Index finger thrust forward with a serpentine movement, followed by sign for "man;" commonly interpreted "Snake people," but perhaps originally designed to indicate the manner of weaving the rushes. Cf. *Gyāi'ko*.

So'npata—see *A'se'gya*.

Son-t'aiñ p'a—"white grass creek;" a branch of White river of Brazos river, Texas.

So'soni—see *So'ndo'ta*.

Soto—Auguste Chouteau, the first trader regularly established in the Kiowa country, about 1835.

t'a—(1) Ear; singular, *t'a*; dual, *t'ati*; plural, *t'agä*. (2) Antelope; plural, *t'a'sedäl*. *T'äp*, the generic word for deer, antelope, etc, is sometimes used specifically for antelope. Cf. *kyai'guan* and *tañ'gia*.

tä—eye; dual, *täti*; plural, *tägä*.

t'ä—first light (?) Cf. *ki'ätä*.

ta'-ä—the elm (*Ulmus americana*); literally, "saddle wood," from *ta'gyä* and *ä*, because used by the Indians to make saddle trees; also called *ga'dal-ä*, "buffalo wood," because the buffalo liked to stand under its shade.

Tä'binä'näkä (Comanche)—"Hears- (or understands-) the-sun;" a noted Comanche chief, who died in 1892. By the Kiowa he was called *Pai'-ta'ya*, an exact rendering of his Comanche name.

T'a'-bo'dal—"Spoiled-ear;" the Kiowa call by this name an earless Navaho killed by them in the winter of 1867-68. *Bodal* seems to refer to "cut off," distinct from *p'odalta*. Cf. *ka'bodal*.

ta'dal—lean (adjective).

tä'däldä—hole.

Ta'dalk'i'a—"Lean-man;" agent P. B. Hunt, 1878-1885.

tä'dalkop—smallpox; literally, "hole sickness," from *tä'däldä* and *kop*.

Tä'dalkop p'a—"smallpox creek;" Mule creek, a tributary of Medicine-

lodge creek, Oklahoma; so called because the Kiowa held there the first sun dance after the smallpox epidemic of 1861-62.

Tá'guga'la (Jemez pueblo)—see *Tagu'i*.

Tagu'i—Apache, etc; the generic Kiowa name for all tribes of Athapaskan or Apache stock. In consequence of the death of a person of that name, it was superseded for a time by *K'a-pä'top*, "Knife-whetters," but the original name is now restored. The etymology is uncertain, but the word is evidently connected with *Tá'guga'la* and *Ta'gukere'sh*, and perhaps with *Tashñ*, *Ga'ta'ka* and *Tha'ka-hině'na*. Cf. *T'a'ka'-i*. The Kiowa include under this generic term the *Á'-tagu'i* (Lipan), *K'op-tagu'i* (Jicarilla), *Ė'sikwita* (Mescalero), *Do'ko'nsenä'go* (Chiricahua), *Ze'bä-gi'äni* (—), and *Se'mät* (Kiowa Apache). TRIBAL SIGN: Right index finger rubbed briskly up and down along left index finger, as though whetting a knife. For other specific and generic names applied to the Apache, see Kiowa Apache synonymy.

Ta'gukere'sh (Pecos pueblo)—see *Tagu'i*.

T'a'guñ-yä'daldä—"antelope antlers hill," from *t'a*, *guñ*, and *yä'daldä*; Antelope hills, on south side of South Canadian river, near the western Oklahoma line, in E county.

T'a'guño'tal p'a—"moon when the antelope antlers drop off," from *t'a*, *guñ*, *otal*, and *p'a*; a Kiowa moon or month, including portions of August and September.

T'a'guñ'otal P'a Sän—"Little *T'a'guño'tal P'a*;" a Kiowa moon or month, including portions of July and August.

ta'gya—saddle; in composition *ta*, as *ta'-ä*, "saddle wood," *Ta'k'o'p*, "Saddle mountain."

Tägyä'ko—Northern Arapaho (Wyoming), "Wild-sage people," "Sagebrush people," from *tä'gyä* and *ko* or *k'ügo*. Cf. *Á'hyäto* and *Bo'tk'i'ügo*.

tä'gyi—wild sage, sagebrush (*Artemisia ludoviciana*).

taha'—erect, high, curved.

Ta'ha (Apache)—an Apache chief and delegate to Washington in 1870, still living.

ta'ho—refers to "leading confederates." Cf. *Gu'a'na-de'-ta'ho*.

-tai'de—chief, in composition, as *T'ene'-tai'de*, "Bird-chief;" it comes from a root signifying above, top, on top of; *gyätai'de*, he is above, i. e., he is chief.

tai'me—the great Sun-dance medicine of the Kiowa (see page 240). The etymology is doubtful, but the same word signifies also "mosquito" and "silent." *Īmtai'me*, you are silent; *tai'mé'gü'*, talkative, sociable.

tai'me-bi'ïmkâ'i—"tai'me box;" the peculiarly shaped and decorated raw-hide box in which the *tai'me* image is preserved.

Tai'mete'—"Taime-man;" a priest and keeper of the *tai'me* from 1883 until his death in 1894.

t'aiñ—white.

T'aiñ do'ha'—"White bluff." (1) A bluff on upper South Canadian river, near the New Mexico line. (2) (Same?); a bluff at or beyond the head of *Pa p'a* (2), about southeastern Colorado (see Winter 1840-41).

T'aiñ p'a—"White river." (1) An extreme upper northern tributary of South Canadian river, one day's journey below the salt beds (at the New Mexico line), and about halfway to *Gu'adal do'ha'*; perhaps Major Long's creek, Texas panhandle (see Winter 1847-48). (2) Brazos river, Texas, main stream; also White river, alias Catfish creek, near its head.

T'ai'ñte—"White;" special agent E. E. White, 1887-88.

T'aiñ-yä'daldä—"white hill;" a hill or hills near the head of White river of the Brazos, Texas.

Tä'ka Ho'no'rit (Comanche)—see *Ä'sese p'a*.

Tä'-ka'gyä p'a—"eye-triumph creek;" a small branch of Apache creek, on the reservation, near where now is Muchacho's house (see Winter 1879-80).

taka'-i—(1) buckskin; (2) a saddle blanket, of buffalo hide. Cf. *T'a'ka'-i*.

T'a'ka'-i—see *Be'dalpa'go*. Cf. *taka'-i*.

Taka'-i-p'o'dal—"Spoiled-saddle-blanket;" a Kiowa signer of the treaty of 1867, where the name appears as "Fish-e-more, or Stinking saddle;" commonly abbreviated to *Taka'-ite*. The name "Fish-e-more," as given in the treaty, is pronounced *Pi'semâ'i* by the Kiowa, who say that

- it is a foreign word, old, and with no meaning in Kiowa.
- Ta'ka-i-tai de—"White-man-chief;" the Kiowa name of Tsa'yadi'tlti or White-man, present head chief of the Apache.
- Taka-ite—see *Taka-i-p'o dal*.
- TA-KA-TA-COUCHE—"Ta-ka-ta-couche, the Black Bird," a Kiowa signer of the treaty of 1837, as the name appears in the treaty. The correct form may be *T'ene-ko'ñ kya*, q. v.
- t'a'-ko'ñ—"black-ear;" a variety of horse, light in color, but with black ears, prized by the Kiowa as the best for racing. Sometimes particularly specified as *t'a'-ko'ñ tseñ*, "black-eared horse" (see Summers 1861 and 1867).
- Ta-ko'ñ—"Black-ear;" a noted race horse stolen by the Navaho in 1867 (see the preceding).
- Ta-k'op—"saddle mountain," from *ta'gyä* and *k'op*; Saddle mountain, near the head of Walnut creek, on the reservation.
- tä'lä—folded, bent double, shortened (applied only to feathers).
- tä'lyi—boy; plural, *tälyu'p*, or in some proper names *tälyu'i*.
- Tälyi-da'-i—see *Ä'dalbea'hya*.
- Tamisi—Thomas C. Battey, first teacher among the Kiowa, in 1873; now living in Mosk, Ohio.
- t'an—small, little; an archaic word used now only in proper names. The common word is *sän*, q. v.
- tän—(1) an edible turnip-like root; (2) a kind of headdress of upright feathers, a crest of feathers; *ätä'ndo*, he has a headdress of upright feathers.
- TA-NE-CONGAIS—see *T'ene'-ko'ñkya*.
- tañgia—deer, a ceremonial word, used only by old people; *tañgi'apa'*, a buck deer; *tañgi'atsä'*, a doe. The common word is *kyai'guan*, literally "jumper," or *t'äp*, q. v.
- Taagi apa'—"Buck-deer;" a Kiowa warrior killed by the Mexicans in 1850-51.
- Tä n-gu'ädal—"Red-feather-head-dress," (or red *tän* root?); a noted Kiowa warrior killed in Texas in 1868-69. Cf. *Tä'n-ko'ñkya*.
- t'ani—smooth; *t'äñeda*, it is smooth.
- Tä'n-ko'ñkya—"Black-feathered-head-dress;" a noted Kiowa war chief who died in 1865-66. Cf. *Tä'n-gu'ädal*.
- tä'ñpe-ä—the skunkberry bush (*Rhus trilobata*); plural *t'äñpe ko: t'ä'ñpe-i*, skunkberry. The seeds or berries are eaten raw, or beaten up with sugar, and considered a dainty, although very bitter.
- Tä'ñpeä' p'a—"skunkberry creek;" a southern tributary of the South Canadian, about opposite Lathrop, in the panhandle of Texas. White-deer creek (?).
- T'äñpe'ko—"Skunkberry people," alias *Tse'ñ-ä'dalka'-i*, "Crazy Horses;" the "War-club" band of Clark. One of the six Kiowa military orders (see page 229).
- T'a'ñ-yä'daldä—"smooth hill," from *t'añi* and *yä'daldä*; a hill or mountain near Fort Clark, southern Texas.
- T'a'ñ-yä'daldä p'a—"smooth-hill river;" Las Moras creek (?) of the Rio Grande; described as at Fort Clark (see the preceding).
- T'a'ñ-yä'daldä- yä'pähe'gya—"smooth hill soldier place;" Fort Clark, southern Texas (see the preceding).
- t'äp—deer, antelope, etc, especially antelope. Cf. also *t'a*, *kyai'guan*, *tañgi'a*, *ko'ga'-i*.
- Tä'säwi (Comanche)—A Comanche signer of the treaty of 1867, where the name appears as "To-sa-in, To-she-wi, or Silver Brooch."
- T'a'-sep—see *Sä'k'ota*.
- Ta'shñ (Comanche)—see *Tagu'i* and Kiowa Apache synonymy.
- Ta'-tätthe'ñte—see *Pa'-ta'dal*.
- t'a'-tse'ñ—wild horse; literally, "antelope horse."
- Tä'yäkwö'ip (Comanche)—"Sore-backed-horse;" a Comanche signer of the treaty of 1867, where the name appears as "Tir-ha-yah-guahip, or Horse's Back."
- t'a'-zo'tä'—an antelope corral or driveway (see page 309). Cf. *zo'tä'*.
- T'a'-zo'tä' p'a—"antelope corral creek;" Bear creek, between Cimarron and Arkansas rivers, near the western line of Kansas.
- te, -ti—a personal suffix, usually masculine, in proper names.
- T'e'bodal(-te)—"One who carries a pack-of-meat-from-the-buffalo's-lower-leg;" the full form would be *T'e'bodal-pä'te* (cf. *Tso'k'o'dalte*), from *t'epga*, *odal*, and *te*; the oldest man of the Kiowa tribe, now about eighty years of age.

te'dal—white clay; used by the Indians for paint; another form is *te'li*.

Te'dal toñ—"white-clay spring;" a water hole on the Staked plain, so called from the white clay found there. There are two wells on the Staked plain, known as Tierra Blanca or Ojo Blanco, one in Texas, the other in New Mexico.

Te'guă(-go)—Pueblo; the name is a derivative from Tegua or Tewa and includes all the Pueblo Indians; the Comanche form is *Tewa*. They were formerly also called *Be'dalpahe'nko*, "Beardless people" (cf. *Be'dalpa'go*) and are sometimes designated as *Po'bă-ro*, a Comanche corruption of "Pueblo." SIGN: Hair grasped behind with the right hand, to indicate the Pueblo style of bunching it.

Tehä'neko, Tehä'no—Texans, singular *Tehä'nek'i*, from the Spanish *Tejano*. The Kiowa and associated tribes always regarded the Texans as a distinct people from the *T'o-t'a'ka'-i*, or Americans, of Kansas and the north.

TEH-TOOT-SAH—see *Doha'sän*.

te'li—see *te'dal*.

tem—bone; plural *toñ*.

ten—heart.

Te'n-ät'a'nte—"Little-heart," from *ten*, *t'an*, and *te*; a Kiowa warrior killed by the Pawnee in 1851.

te'nbe—see *ä'dalto'yi*.

Te'nbe k'op, or Te'nbei'a k'op—"Wild-sheep mountain," i. e., "Te'nbeyu'i mountain," because the Te'nbeyu'i, q. v., used to dance there at a spring near the river; a mountain on the east side of North fork, just below Elk creek, on the reservation; sometimes incorrectly called *Gabo'dăli k'op*, "Sheep (or goat) mountain."

Te'nbeyu'i—see *ä'dalto'yi*.

t'ene'—bird; on account of a death a few years ago the word *gu'ăto* is now used instead.

T'ene'-ango'pte—"Kicking-bird," usually abbreviated to *Ango'pte*, from *t'ene'*, *gyä'ango'p*, and *te*: (1) A Kiowa warrior about 1843. (2) A noted chief who died in 1875; upon the treaty of 1867 his name appears as Ton-a-en-ko, "Kicking Eagle."

T'ene'-badai'—"Bird-appearing;" a Kiowa warrior noted for his good looks, killed by the Caddo in 1860.

T'ene'-ko'nkya—"Black-bird;" a Kiowa signer of the treaty of 1837, where the name appears as "Ta-ne-congais, the Sea Gull."

T'ene'pi'abi—"Hummingbird;" a Kiowa warrior and Florida prisoner in 1875, still living. The ordinary word for hummingbird is *mansa-t'ene'*, "thumb-bird."

T'ene'-tai'de—"Bird-chief," from *t'ene'* and *-taide*; a Kiowa warrior, still living; also called *Pa'to'*, a word of unknown meaning.

T'ene'-ze'pte—"Bird-bow" (?) from *t'ene'*, *zepko*, and *te*; a Kiowa warrior shot by Sun-boy in 1872. The name might possibly mean "Bird-teat."

Te'n-pi'äk'ia—"Heart-eater," from *ten*, *piä*, and *k'ia*; a noted Kiowa warrior and medicine-man, rival of Anso'te and father of Se't-t'a'n, and accidentally killed in 1853. He took his name from the fact that his "medicine" was to eat a small piece of an enemy's heart every time he killed one. The same thing was done by several other Kiowa warriors under certain circumstances, the only approach to cannibalism in the tribe. A man now living is called *Te'npi'äte*, "Heart-eater," from *ten*, *piä*, and *te*.

tep—the root of a verb signifying "to come out," "to migrate." Cf. *toñtep*, *Te'pdă'*, *Tepgañ p'a*.

Te'pdă'—Kiowa; see Kiowa synonymy.

t'epga—meat from the calf of the leg of the buffalo, etc; in composition, *t'ep*.

Te'pgañ P'a—"Goose-migrating moon," from *gañ*, *tep*, and *p'a*; a Kiowa moon or month, including parts of November and December; also called *Bonpă P'a*, "Sweat-house moon."

Tepk'i'ägo—Kiowa; see Kiowa synonymy.

TEP-PE-NAVON—see *Ti'pinäro'n*.

Tha'ka'-hině'na (Arapaho), or Tha'ka'-i-tü'n—the Kiowa-Apache; see Kiowa Apache synonymy.

TIL-LA-KA—see *Ti'l-lakai'*.

Ti'l-lakai' (Apache)—"White-horn;" an Apache signer of the treaty of 1867, upon which his name appears as "Til-la-ka, White Horn."

Ti'p ho'norit (Comanche)—see *Tso p'a* (2).

Ti'pinäro'n (Comanche)—a Comanche signer of the treaty of 1867, upon which the name appears as "Tep-pe-navon, Painted Lips."

TIR-HA-YAH-GUAHIP—see *Tä'yäkwöip*.

t'o—cold, in composition, from *gyät'o'*.

to'de—taken back, or returned, after receiving (as result of a quarrel or remorse).

to'gya—after, past; *gi'ña-to'gya*, after midnight.

t'o'gyä—coat, shirt.

TOHAINT—see *Dohe'nte*.

TOHASAN—see *Doha'sän*.

TO-HO-SA—see *Doha'sän*.

to'i—a curve.

t'o'idä—uncommon, accidental, abnormal; as a pinto horse, a six-fingered hand, etc.

t'o'igu'ät—pinto, variegated in color, especially a horse, from *t'o'idä'* and *guätgya*.

T'o'-k'i'ñähyup—"Cold Men," i. e., men of the cold or northern country, from *gyät'o'* and *k'i'ñähi*; one of two former local divisions of the Kiowa, including those who ranged chiefly on Arkansas river and the Kansas frontier. Cf. *Gwa'hale'go* and *T'o'-t'a'ka'-i*.

Tome'te—the Kiowa name of an early trader who located a trading post about 1837 a short distance south of Fort Sill, on the spot afterward occupied by William Madison (*Se'npö-ze'dalbe*, q. v.). The Kiowa form is a derivative from his proper name (Thomas?).

ton—tail.

toñ—water; also leg in composition, from *to'ñti*.

TON-A-EN-KO—see *T'ene'-ango'pte*.

To'n-ak'a'—"Water-turtle," literally "notched tail;" a noted Kiowa medicine-man in 1884-85. Cf. *k'a'ñkiñ*.

To'ñ-bi'ändä'ta—"boiling water;" Colorado Springs, Colorado.

To'ñ-dahä—"medicine, i. e., mysterious, water;" a natural rock well, large and deep, near the head of Scout creek, in the Texas panhandle. It is so called probably from a tradition of some water spirit or monster dwelling there. Cf. *To'ñ-dahyä'*.

To'ñ-dahyä—"medicine water, mysterious water;" a lake somewhere in the mountains of the far north, near which

the Kiowa Apache locate one of their most noted wonder stories. The name seems to be an archaic form for *To'ñ-dahä'*, q. v.

toñgu'ayo—sitting with legs crossed and extended; I sit so, *ätoñgu'ayo-ä'ngya*, from *toñti*, *gu'ayo*, legs crossed and extended, and *ä'ngya*.

Toñhe'ñ p'a—"waterless, i. e., dry, creek;" Sand creek, Colorado, a northern tributary of Arkansas river, and the scene of the Chivington massacre.

Toñhe'ñ-t'a'ka'-i, or Toñhe'ñ-t'a'ka'-i-do'mbe—waterless Mexican (country); the people and region of Chihuahua and upper Coahuila, Mexico.

Toñhyo'pdä—the "Pipe-bearer," or officer who marched at the head of the young warriors on an expedition; he did not necessarily carry a pipe. Etymology doubtful.

To'ñko'ñ—"black water;" a pond on the edge of the Staked plain, about three days' journey westward from Double mountain, in Texas; perhaps Agua Negra, just inside the Texas line, about 34°.

To'ñko'ñ p'a—"black-water creek;" a southern tributary of the Washita, about five miles below the Custer battle-field (*Doä'dal-ko'ñkya-cho'taldee*), in F county, Oklahoma.

Toñko'ñko—"Black legs," from *toñti*, *ko'ñkya*, and *ko*; singular, *Toñko'ñ-gyäk'i'a*. (1) The Blackfoot Indians. (2) One of the six Kiowa military orders, the Raven, Raven Soldiers, or Black Leggings of Clark (see page 229).

To'ñpeto—"Afraid-of-water," from *toñ* and *gyä'pe'to*; the Kiowa rendering of the name of the Comanche chief *Päre'iyä*, who made the final peace between the two tribes.

toñp'o'dal—lame, from *to'ñti* and *p'o'daltä*; I am lame, *äto'ñp'o'daltä*.

Toñp'o'dal-kyä'to—"Lame-old-man;" a Kiowa war chief in 1832.

To'ñsâhe' p'a—"blue (or green) water river;" Colorado river of Texas. It is called "blue water" or "blue river" by the Comanche also.

To'ñteb-e'dal p'a—"big-spring creek;" probably Giraud creek of Red fork of Colorado river, Texas; described as southward from Double mountain,

- near the emigrant road. There is a town named Big Spring on Giraud creek.
- to'ntep—a spring, from *toñ* and *tep*; commonly abbreviated to *toñ* in geographic names.
- To'ntep p'a—"spring creek;" Fontaine qui Bouille creek, Colorado.
- to'nti—leg; in composition, *toñ*.
- Toñtsi'mgyä p'a—"crooked-water creek," from *toñ* and *tsi'mgyä*; Crooked creek, in the Cherokee strip, Oklahoma.
- to'ñzo'—current (of a stream); *toñzo'lya*, the water is flowing.
- To'ñzo'go'dal p'a—"strong current (i. e., swift water) river," from *to'ñzo'*, *got*, plural *go'dal*, and *p'a*; apparently a head branch of Pease river, Texas, and described as midway between Red river and the Staked plain, where they are one day's journey apart. Also called *Päbo p'a*, "American-horse river," from a fight there in which the Kiowa took from the Texans a number of American horses, the largest they had ever seen (see Winter 1841-42).
- Tooc-a-nie Kiowa—(for Tawa'koni, a subtribe of the Wichita.) During the outbreak of 1874-75 "a band of Tooc-a-nie Kiowa (part Wichita and part Kiowa) who had been for several years with the Wichita and Waco, went to the Kiowa of the Kiowa agency" (Agent T. S. Free, page 289, Indian Report, 1875).
- to'pde—before (in time).
- TO-SA-IN OR TO-SHE-WI—see *Tä'säwi*.
- T'o'-t'a'ka'-i, T'o'-t'a'ka'-i-dombe—Americans and the United States, as distinguished from Mexicans and Texans and their country; literally, "cold white-man country," i. e., "northern white-man country," and hence "cold, i. e., northern, white men," from *gyät'o'*, *t'a'ka'-i*, and *dombe*. Cf. *T'o-k'i'ñähyup* and *Tehä'neko*.
- tsä—a feminine suffix, as *kyai'guan*, deer, *kyai'guantsä'*, doe. Cf. -mä under *mä'nyi'*.
- tsä'—comrade, partner.
- tsä'dal—goose; also *gañ*.
- Tsä'dal-t'a'iñ—"White-goose," i. e., Swan; a hostile Kiowa chief in 1874.
- Tsäli—"Charley," the Kiowa name of the trader Charles W. Whitacre (or Whitaker). He is mentioned as present at the treaty of 1867, and later had a trading house on the north bank of the Washita, opposite Anadarko, just above the present Wichita school. He accidentally shot himself in 1882.
- Tsäli Esän—"Little Charley" (plural form); Charles Rath, of the trading firm of Rath, Wright & Reynolds, formerly at Fort Sill.
- tsän—he came, they came; sometimes used for return; cf. *ää'*.
- tsä'nkia—a (horse) race.
- Tsä'nkia-ki'adä—see *Tso'lai'*.
- tsä'nyi—see *polä'nyi*.
- Tsä'nyui—see *Polä'nyup*.
- Tsä'pi'ä p'a—"prairie-dog-eating river," from *tsäto*, *piä*, and *p'a*; a large western tributary of Rainy-mountain creek, on the reservation. So called because about twenty-five years ago, while the Kiowa were camped there, a rain drowned out a large number of prairie dogs and the Indians killed and ate them.
- tsä'to—prairie-dog; in composition, sometimes *tsä*; singular and plural alike.
- Tsä'to-yä'daldä—"Prairie-dog mountain;" a prominent mountain or bluff 20 miles west of Vernon, Texas, between Pease river and Red river.
- Tsä'to-yä'daldä pe p'a—"prairie-dog mountain sand river;" Pease river, an upper branch of Red river, in Texas (see the preceding).
- Tsa'yadi'tlti* (Apache)—see *T'a'ka'-i-tai'de*.
- tse'—short; I am short, *äko'ntse'*; he is short, *o'ite kontse'*. Cf. *etse'*, thick.
- tse'dal(-te)—situated, situated upon.
- tsen—mud, clay. Cf. *tseñ*.
- Tsen p'a—"mud creek." (1) The lower part of Sugar creek, alias East fork of Rainy-mountain creek, on the reservation. Cf. *Tsodo'm p'a* and *Se'pyä'daldä p'a*. Another authority says it is lower Rainy-mountain creek, below the junction of the two main forks. (2) Little Wichita river (at Henrietta), Texas.
- tseñ—horse, plural *tseñko*; old names are *tai'de* and *gu'äpedal*. A wild horse is called *t'a'-tse'ñ*, "antelope horse" (see also *päbo*). Cf. *tsen*.
- Tse'ñ-ä'dalka'-i—see *T'äñpe'ko*.

tseñhi—dog, plural *tse'ñhyup*; in consequence of a death the word *tse'guan*, properly “travois,” was substituted about five years ago.

tsenka'n—a burn; I burn it, *ätse'na'nmo*.

tseñko—horses, plural of *tseñ*, q. v.

Tse'ñ-ko'ñkya—“Black-horse,” a noted Kiowa warrior killed by the Sauk in 1854.

Tse'ñ-t'ai'ñte—“White-horse;” a noted Kiowa raider, who died in 1892.

Tseñtän p'a—see *Ä'do-ee'tä-de p'a*.

Tseñtä'nmo—“Horse-head dress people” (?) from *tseñ* and *tän*; singular, *Tse'ñtänk'i'a*. One of the six Kiowa military orders, the Feather Head band of Clark (see page 229, *ante*).

-tse'yu—a suffix denoting a pet or domesticated animal, or the young of an animal; also *tseyi*, plural *tse'yu'i*; *t'ene'-tse'yu*, chicken; *setse'yu* (*set-tseyu*), hog; *Gu'ädal-tseyu*, “Red Pet,” or “Little Red.”

tsi'mgyä—crooked.

tso—rock, stone.

Tso p'a—“rock river.” (1) The Purgatoire or Las Animas river, a south tributary of the Arkansas, in Colorado. (2) San Saba river, Texas; called also *Típ ho'novit*, “rock river,” by the Comanche.

Tso'ai'—“tree rock,” i.e., monument, from *tso* and *ä*. (1) The Mato-tipi or Bear lodge of the Dakota, also known as the Devil's Tower, near Sundance, Wyoming; the Kiowa have a myth concerning it. (2) A monument-like rock, somewhere on the Salt fork of Arkansas river.

tso'dal—wing, and figuratively, arm (applied only to the upper arm).

Tso'dalhe'ñte—“No-arm,” from *tso'dal*, *heñ*, and *te*; William Allison, who built and kept a trading post on the Arkansas, just below the junction of Upper Walnut creek, for fifteen years or more, about 1850 to 1865. Fort Zarah was a short distance above, on the north bank of Walnut creek. He was so called from having had his left arm shot off in a quarrel. Sometimes also called *Mánhe'ñk'ia*, conveying the same meaning, from *mándä*, *heñ*, and *k'ia*.

Tsodalhe'ñ-de p'a—“No-arm's river;” Upper Walnut creek, a northern tribu-

tary of Arkansas river in Kansas (see *Tsodalhe'ñte*).

Tsodalhe'ñ-de P'a'gya-Yä'pähe'-k'u'dal-de'e—“place where (*de'e*) soldiers (*yä'pähe'*) stay (*k'u'dal*) at (*-gya*) No-arm's river” (*Tsodalhe'ñ-de p'a*); Fort Zarah, Kansas, formerly on the left (north) bank of Upper Walnut creek, 2 miles above its junction with the Arkansas. Just below it was Allison's trading post.

tso'dal-tem—“wing bone,” from *tso'dal* and *tem*; a whistle made from the wing bone of an eagle, and used in the Sun dance and the peyote ceremony.

Tso-do'i-gyätä'dä'-de'e—“rock house (i. e., cave) in which they were surrounded,” from *tso*, *do'*, *gyätä'dä*, and *de'e*; the Hueco Tanks, in western Texas, just south of the New Mexico line (see Summer 1857).

tsodo'm—a stone mortar, from *tso* and *dom*.

Tsodo'm p'a—“stone-mortar creek;” Sugar creek, the eastern fork of Rainy-mountain creek. Cf. *Tsen p'a* and *Se'pyü'daldä p'a*.

Tso'-gyäze'mä—“moving stones;” a lake or water hole on the Staked plain, in Texas, so called because, according to the Indians, the stones there shift about. They do not add *toñ* or *setso'*. Perhaps Laguna Sabinas.

tso'ka—rock bluff precipice, from *tso*. Cf. *Tso'kaka'n*, *Tso'kada'hä'*, also *do'ha'*.

Tso'kada'hä' (or *Tso'kada'hä'go*)—“medicine bluff,” from *tso'ka* and *da'hä*; Medicine bluff, a noted precipice on the south side of Medicine-bluff creek, about 3 miles west of Fort Sill, on the reservation. It is figured in Marcy's report.

Tso'kada'hä p'a—“medicine-bluff creek;” Medicine-bluff creek, or Bluff creek, joining Cache creek near Fort Sill.

Tso'kada'hä'gya (-Yä'pähe'-k'u'dal-de'e—Fort Sill, on the reservation. The full name signifies “where the soldiers stay at Medicine bluff,” but as the place is so well known it is commonly abbreviated to *Tso'kada'hä'gya*, “At Medicine bluff.”

Tso'kada'hä' So'le p'a—see *So'le p'a*.

Tso'kaka'n—“end of the bluff,” from

- tso'ka* and *aka'n*; a point on the south side of the North fork of Red river above the junction of Elm fork, at *K'o'b-aka'n* mountain, q. v., in Greer county, Oklahoma.
- Tso'k'o'dalte*—"Stone-necklace," from *tso*, *k'o'dalpä*, and *te*; a Kiowa girl who died in 1845. The full form would be *Tso'k'o'dalpä'te*. Cf. *Äk'o'dalte*, *T'ebo'dalte*.
- Tso'lai'*—Fourth of July; the Kiowa think this is the name of the day instead of the month. On account of the Indian races encouraged by the traders and officers on this occasion, it is also known as *Tsä'nkia-ki'adä*, "race day."
- Tso'nboho'n*—"Down-feather-cap," from *tsoñkya* and *boho'n*; an early head chief of the Kiowa.
- tso'nda*—light-haired. Cf. *boiñ*.
- tso'ñkya*—down feathers; in composition, *tsoñ*.
- Tso'n-t'a'ka'-i*—light-haired, or blond Mexicans, from *tsoñda* and *T'a'ka'-i*; the Mexicans about Laredo, on the lower Rio Grande.
- tso'paiñ*—adobe; literally, "dust rock," or "earth rock," from *tso* and *paiñ*.
- Tso'paiñ Do'*—"adobe house;" Bent's fort, on Arkansas river, in Colorado. Originally built of adobe, by William Bent, the noted trader for the Cheyenne, on the north bank of the Arkansas, 15 miles above the junction of the Purgatoire, and about halfway between the present La Junta and Las Animas. It was abandoned by him about 1849. In 1860 Fort Wise, afterward called Fort Lyon, was established near the same site, and was called by the same name among the Kiowa until the removal of Fort Lyon farther up the river in 1867. (See list of posts, etc, page 382.)
- tsoq'* (Comanche)—that! A Comanche word commonly used by Comanche, Kiowa, and Apache in the *do'a'* game.
- Tso'sa' p'a*—"—— rock river;" Yellowstone and upper Missouri river; etymology doubtful; *tso* is rock or stone, and *sa* is said to be connected with *sa'top*, pipe, but may possibly be from some obsolete word for yellow, whence "Yellowstone." According to Clark, the Indians call this stream "Elk river," from its head to Powder river, or only to Rosebud river, while below that they call it and the Missouri the "Muddy, or Big Muddy river."
- Tso'-t'ai'ñ p'a*—"white-rock river;" a creek, perhaps Wanderer creek, described as a southern tributary of North fork, above Doan's, in Greer county, Oklahoma.
- Tso't'ai'ñto'nda'ti*—"spring where there is rock above," from *tso*, *taide*, *toñtep*, and *dati*; Cedar spring, on Fort Sill road, about 4 miles southward from Anadarko.
- Tso'-t'a'ka'-i* or *Tso'-t'a'ka'-i-dombe*—"rock white-man (country);" the Mexicans and their country about Silver City, southwestern New Mexico. The Kiowa generally kept on friendly terms with them and traded with them for silver ornaments. The name may have included also the Chihuahua mountain region. Cf. *K'o'p-t'a'ka'-i*, *Toñhe'ñ-t'a'ka'-i*, *Ä'-t'a'ka'-i*, *T'o-t'a'ka'-i*.
- TUNK-AHT-OH-YE**—"Tunk-aht-oh-ye, the Thunderer;" the name of a Kiowa boy, brother of *Gunpä'ndamä*, as given by Catlin, who painted his picture in 1834. The form can not be identified.
- ūsarē'rāhu* (Pawnee)—a Pawnee moon or month (see page 371).
- Wa'bäna'ki*—Delaware, from one of their own names, *Wa'bana'qki*; there is a band of about 100 on the Wichita reservation.
- Wasa'si*—see *K'apä'to*.
- WA-TOH-KONK**—see *Gu'ato-ko'ñkya*.
- Wi'tapähä'tu* (Sioux and Cheyenne)—the Kiowa (see Kiowa synonymy).
- wo'ha'*—cow; a jargon word used between Indians and whites and supposed by the Indians to be the English name, from the fact of having heard it used so frequently in the form of "whoa haw!" by the early emigrants and Santa Fé traders in driving their ox teams. The proper Kiowa word is *tsenbo*.
- Woha'te*—"Cow;" a Kiowa warrior and Florida prisoner in 1875.
- Wo'ifdo'ish* (Cheyenne)—see *A'päta'te*.
- WUN-PAN-TO-MEE**—see *Gunpä'ndamä*.
- yä'daldä*—hill; there is no fixed distinction between this word and *k'op*, mountain, but the latter is generally under-

stood to mean a higher and more rocky elevation. Cf. *k'op*, *ba'dlo'*, *do'ha'*, *tso'ka*.
Yä'daldä p'a—see *Guadal-k'udal-dee p'a*.
yai'po—rope, sash.

yai'po-gu'ädal—"red sash;" the name of three of the ten sashes of the *Kä'itse'ñko*, made of red cloth (see page 285).

yai'po-ko'ñkya—"black sash;" the principal of the ten sashes of the *Kä'itse'ñko*, made of black elk skin (see page 285).

Yä'pähe'—warrior, soldier (no plural form); the military organization of the Kiowa (see page 229). Within the last twenty years, since their intimate acquaintance with the whites, the old term has been generally superseded by *so'le*, plural *sole'go*, from "soldier."

yi'a—two.

Yi'a k'op—"two mountains;" Double mountain, between the two forks of Brazos river, Stonewall county, Texas.

Yi'a k'op p'a—apparently the name of Double-mountain fork of Brazos river.

Yi'a P'a-da'ti—"at the two creeks," i. e., "at the forks;" the forks of Washita river, where Gageby creek joins the main stream, on the western line of Oklahoma. When necessary, it is further described as near the head of the Washita.

yi'ätä'te—see *do'ti*.

Yi'ätä'tehe'ñko—see *Dohe'ñko*.

Ze'bä-do'-k'i'a—see *Ä'to-t'ai'ñ*.

Ze'bä-gi'äni—"Long-arrows;" an unidentified band of the Apache proper (see *Tagu'i*.)

ze'bat—arrow, plural *zebä*. The medicine lances carried by Set-t'a'iñte and Tängu'ädal were also called *ze'bat*.

ze'dälbe—terrible, powerful, wonderful, dangerous; *gyäze'dälbe*, it is wonderful.
zep—milk, teat.

zepko—bow (for shooting).

Ze'pko-ee'tte—"Big-bow," from *zepko*, *ee't*, and *te*; (1) a Kiowa war chief about 1843. (2) his grandson and successor of the present day, the "Zipkoh Eta" of Battey.

ZIPKOH ETA—see *Ze'pko-ee'tte*.

zo'dal—vomiting; vomit (noun), *zo'dal*; I vomit, *dehi'äto*.

Zo'daltoñ p'a—"vomiting spring (or water) creek;" the upper part of Walnut creek, a southern tributary of the Washita, on the reservation; so called on account of a (medicinal ?) spring, near its head, which induces vomiting. Sometimes known to the whites as Stinking creek.

zoñ—tooth, plural *zoñko*.

Zo'ñk'i'a—"Tooth-man;" a Kiowa warrior and Florida prisoner in 1875; also known as *Ki'ñasä'hek'i'a*, "Green-shield-man," from *kiñ* or *kyuñi*, *sä'he*, and *k'ia*.

Zo'ñtam—a Kiowa warrior and Florida prisoner in 1875, afterward educated in the East and ordained as an Episcopal minister in 1881 under the name of Paul Zotom; now with his tribe. The name refers to biting, from *zoñ*, tooth. He is sometimes called *P'o'dal-ä'dalte*, "Snake-head."

zo'tä'—a corral or driveway for catching antelope (see page 309). *Kazo'tätso'ta*, I am going to make a corral; figuratively, I am going to entrap some one.

ZOTOM, PAUL—see *Zo'ñtam*.

ENGLISH-KIOWA GLOSSARY¹

Abell, W. H., special agent—see *Pa'che'mgo'te*.

abnormal—see *t'o'idä'*.

above, he is—see *gyätai'de*.

acorn—*do'go't-e*.

Adams, Agent Charles E.—*Ä'däm*.

Adkins, John—*Kabo'dalk'i'a*.

adobe—*tso'paiñ*.

Adobe Walls, Texas—*Gu'a'na-de'ta'ho*.

Adoption dance—*Iäm guan*.

afraid, I am—*gyä pe'to*.

after—*kigi'a*, *kyäka'n*, *to'gya*.

afternoon—*dehi'ñ*, *dekiäsa*.

agency—*Ezänya*.

Agua Negra (?), Texas—*Toñ'ko'ñ*.

alike—*pä'tsoga*.

Allison, William—*Tsodalhe'ñte*.

alone—see *solitary*.

Americans—*T'o-t'a'ka'-i*.

amulet—*ä'de*.

and—*go*.

antelope—*t'a*, *täp*.

¹The cross references are usually to the Kiowa form which occurs in the text, and not necessarily to the principal form of the word.

- Antelope hills, Oklahoma—*T'a'gu'ñ-yä'daldä*.
 antelope surround—*ät'a'kagu'a*.
 antler—see horn.
 Apache—*Semät, Tagu'i*.
 Apache creek, on reservation—*Se'mät p'a*.
 Apache John—*Goñk'o'ñ*.
 appear—*badai'*.
 apple—see plum.
 approach—see come.
 Arapaho—*A'hyäto, Botk'i'ägo, Tägyä'ko*.
 Arikara—*K'a't'a*.
 Arkansas river—*Se'se p'a*.
 arm—*mändä', tso'dal*.
 arrow—*ze'bat*.
 arrowhead—*se'se*.
 ashes—*sapän*.
 at (locative)—*-gyä*, suffix.
 attack (verb)—*gihä'pa* (see *ĩmdo'häpa*).
 autumn—*pao'ngya*.
 baby—*i'äpa'gya*.
 back (of body)—*gi'äpa'-iñgya, gomtä*.
 Bad-back—*Cho'nshita'*.
 bald—*dä'nto'*.
 bank (of earth)—see wall.
 bark (of tree)—*do'ka'ñi*. Cf. shell.
 Battery creek, Texas—*Ka'to'de'ä p'a*.
 Battey, Thomas C—*Ta'misi*.
 battle—*gi'ägyä*.
 bear (animal)—*onhä'te, set*.
 Bear creek (?), Colorado—*Pa p'a*.
 Bear creek, Kansas—*T'a'-zo'tä' p'a*.
 Bear Lodge, Wyoming—*Tso'-ai'*.
 beard—*senpo*.
 beaver—*p'o*.
 Beaver creek, Oklahoma—*P'o p'a*.
 Beaver creek on reservation—*P'o p'a*.
 before (in time)—*to'pde*.
 behead—*ĩmk'o'daltä*.
 belly—*bot*.
 Bent's Fort, Colorado—*Tso'paiñ Do'*.
 berry—see fruit.
 beyond—*äñga'dal*.
 big—see large.
 Big-bow—*Ze'pko-ee'tte*.
 Big Clear creek (?), Texas—*K'a'-ikon p'a*.
 Big-face—*Do'-e'dalte*.
 Big-horse—*Kä'itseñ'ko*.
 Big-looking-glass—*Pi'änä'ronit*.
 Big-tree—*Ä'do-ee'tte*.
 Big Wichita river, Texas—*Gu'ädal p'a*.
 bird—*gu'äto, t'ene'*.
 bite (verb)—*gyäk'a'ta, gyäzo'ñte*.
 bitter—see sour.
 black—*ko'ñkya*.
 Black—*Koñtä'lyui*.
 Black-bird—*Ta-ka-ta-couche*.
 Black-eagle—*Gu'ato-ko'ñkya*.
 Black hills, South Dakota—*Sa'dalkañi k'op*.
 Black-kettle—*Do'ädal-ko'ñkya*.
 Black-leggings—*Toñko'ñko*.
 blanket—*kata*.
 blond—see bright.
 blood—*om, oñ'kya*.
 blue—*sá'he*.
 Blue hills (?), Kansas—*Ko'ñ-yä'daldä*.
 bluff—*do'ha', süngya, tso'ka*.
 Bluff creek, on reservation—see Medicine-bluff creek.
 Boggy creek, on Wichita reservation, Oklahoma—*Ai-koñ p'a; Gi'atä p'ada'ti*.
 boiling, it boils—*bi'ändä'ta*.
 bone—see *tem*.
 bow (for shooting)—*zepko*.
 box—*bi'ĩmká'-i*.
 boy—*tä'lyi'*.
 branch (noun)—*po'to', po'tä'*.
 brand (noun)—see picture.
 brass—see copper.
 Brave-man—*Nah-tan*.
 Brazos river, Texas—*T'aiñ p'a*.
 breastplate—see necklace.
 bright—*bo'iñ*.
 bring—*gyä'ga'n, gyä'pa'bä*.
 Brulé Dakota—*Paki'-gu'ädalkantä'*.
 Buck creek, Oklahoma—*Ä'dek'i'a-de p'a*.
 buckskin—*taka'-i*.
 bud (noun)—*kä'gu'at*.
 buffalo—*gadal, pa*.
 buffalo chips—*sä'kon*.
 Buffalo creek, Oklahoma—*Pa p'a*.
 Buffalo-horns—*Se't-k'o'pte*.
 bugle—*do'mba'*.
 bull, buffalo—*pa*.
 burn (noun)—*tsenka'n*.
 bush—*pep*.
 bushy, it is—*gyäpe'boñ*.
 buy—see trade.
 Caboon, Thomas—*Mä'ngomhe'ñte*.
 cache (noun)—*kao'dal*.
 Cache creek, on reservation—*So'le p'a*.
 cactus—*se'ñi*.
 Caddo—*Ma'se'p, Ädo'mko*.
 Caddo creek (?), Colorado—*Se'ñ-älo' p'a*.
 candy—see sugar.
 cannonball—*hä'ñtso*.
 canyon—*dan*.
 cap—*boho'n, gañto'n*, (of cartridge) *k'a'-iko'n*.

capture—*ä'ha'gyä*.

Carankawa or Carrizo—*Dohe'nko*.

Carruthers, Paul Saitkopeta—*Se'tk'o'pte*.
carry—*o'dal*.

cat—*bä'otseyu* (see *bäo*).

Cat—*Guñsa'dalte*.

Cataract canyon—see Coconino canyon.

Catfish creek, Texas—*T'aiñ p'a*.

cat-tail rush (*Equisetum*)—*donpä*.

cedar—*ahi'n*.

Cedar spring, on reservation—*Tso'taito'n-da'ti*.

Chandler creek, on reservation—*E'gu'a p'a*.

Cherokee—*Ädo'mko*.

Cheyenne—*Sä'k'otä'*.

Chickasaw—*Ä'domko*.

chicken—*t'ene'tse'yu* (see *-tse'yu*).

Chicken creek (?), Texas—*Sek'a'n p'a*.

chief—*-taide*, in composition.

Chihuahua, Mexico—*Toñhe'n-t'a'ka'-i-do'mbe*.

child—*i* in composition, *i'äpa'gya*.

chimney—see tipi flap.

chinaberry (palo duro)—*ä'go'tä*.

Chiricahua Apache—*Do'-kon'senä'go*.

Choctaw—*Ä'domko*.

cholera—*mayi'agyä'*.

Chouteau, Auguste—*Soto*.

Christmas—*Piä-ki'adä*.

Cimarron river, Oklahoma—*Ä'pätda' p'a*.

circle—*byu'ñi*.

Clark, Fort, Texas—*Tä'n-yä'daldä-yä'pä-he'gya*.

Clarke, E. L.—*Pi'ärai'bo*.

clay, white—*tedal, teli*.

Clay creek, Colorado—*Guädal-k'udal-dee p'a*.

Clear creek, Oklahoma—see Buck creek.

clear of timber, to—*ää'oto'n* (see *ä'oto'n*).

clearing, a cleared place—*ää'oto'n*.

Coahuila, Mexico—*Toñhe'n-t'a'ka'-i-do'mbe*.

coat—*t'o'gyä*.

Coconino canyon, Arizona—*Do'nigap'a'da'-de'e*.

cold (adj.)—*gyät'o', äka'hem*.

Colorado river (?) Arizona—*P'a E'dal*.

Colorado river, Texas—*To'ñsähe' p'a*.

Colorado Springs, Colorado—*To'n-bi'än-däta*.

Comanche—*Gyai'ko* (see also *Ä'gyai'ko* and *Gwa'hale'go*).

come, I—*ää*. Cf. *tsän*.

compressed—*ka'-igihä'*.

comrade—*tsä'*.

Concho river, Chihuahua, Mexico—*O'n-guä p'a*.

conspicuous—*ahi'n*.

copper (and brass)—*hä'n-gu'ak'o*; see metal, *hä'n-gya*.

Corbeau—*Gaa'-boho'n*.

corral—see driveway.

cottonwood—*ä'hiñ*.

country—*do'mbe*.

coup (French)—*gi'ägyä*.

courting—*k'ioñ*.

cow—*tse'nbo, wohä*.

cowbird (?)—*ä'to*.

coyote—see wolf.

cramp (noun)—*mayi'agyä'*.

crazy—see foolish.

creek—*ase', p'a*.

Creek (tribe)—*Masko'ki, Ädo'mko*.

crooked (adj.)—*tsi'mgyä*.

Crooked creek, Oklahoma—*Toñ-tsi'mgyä p'a*.

crow (bird)—*ma'nšä', gaa'*.

Crow (tribe)—*Gaa'k'i'ägo*.

Crow, The—*Gaa'-boho'n*.

crown of head—*dänpa'-iñgya*.

cry, I—*äa'lyi*.

cuirass—*hä'n-t'o'gyä, k'a'-t'o'gyä*.

current (of stream)—*to'nzo'*.

curve (noun)—*to'i*.

curved—*taha'*.

cut, I—*gyäk'a'go, gyätä'dä*; cf. knife, *k'a*.

Cut-off—*K'a't'a* (a Kiowa division).

dance—*gu'än*.

dangerous—see terrible.

Dangerous-eagle—*Gu'ato-ze'dälbe*.

dawn (noun)—*gyäpa'-iñgya, ki'ät'ä'*; cf. morning.

day—*ki'adä*.

Day, Agent George D.—*İ'masä'nmot*.

dead—*hem*; cf. die.

Deep creek, on reservation—*Säne p'a*.

deer—*kyai'guan, ta'ñgia, t'äp*.

Deer creek, Oklahoma—*Gyai'-yä'daldä p'a*.

deformed—see spoiled.

Delaware (tribe)—*Wa'bäna'ki*.

Delaware creek, on reservation—*K'o'p-t'a'ka'-i p'a*.

Devil river, Texas—*Hi'ädäl gyu'ñhä'te p'a*.

Devil's Tower, Wyoming—*Tso'-ai'*.

die (verb)—*hem, hi'ñatä'*.

diminutive suffixes—*-e, -i, -tse'yu*.

dissatisfied, I am—*atä'n̄ta*.

dog—*tse'n̄hi*.

Dog Soldier—*Yä'pähe', Kā'itse'n̄ko*.

dogwood (*Cornus asperifolia*)—*sek'a'n*.

Double mountain, Texas—*Yi'a k'op*.

Double-mountain fork of Brazos river, Texas—*Yia k'op p'a (?)*.

Double-vision—A Kiowa warrior and Florida prisoner in 1875 (Report, 1875); not known by Indians under this name.

down (noun)—(of feathers) *tso'n̄kya*; of fruit, as a peach; fine fur, fuzz, *pa*.

downy—*pagi*. Cf. down, *pa*.

drag, I—*deku'eba'* (see *etku'egan*).

dragonfly—*ka'-ikonho'dal*.

driftwood—*äzo't (?)*.

driveway (for catching antelope)—*zo'tä', t'a-zo'tä'*.

Duck creek, Texas—*Sa'kon-yä'daldä p'a*.

dung—*sa'gya*.

dust—*paiñ*.

dusty—*gyäpaiñ'yum, paiñ'yoñhä'*.

dwell—*k'udal*.

eagle (golden)—*gu'atohi'n̄*.

Eagle-heart—a Kiowa raider in 1871; *Gu'atote'nte (?)*.

ear—*t'a*.

earth—*dom*.

east—*pai'-ba'te de'pe'bä* (see *pai'-ba'da*).

eat—*gyä'pa'to*; cf. eating and food.

eating—*piä*.

eight—*yä'se*.

elbow—*mā'nte'm*; cf. arm.

Elliott, Fort, Texas—*Iyu'gu'a P'a Sole'go*.

elk—*ko'ga'-i*.

Elk—*Ko'ga'-i, Kō'gu'i*.

Elk creek, on reservation—*Donä'i p'a, Ko'ga'-i p'a*.

Elk creek, east fork, on reservation—*Ä'ga'-i p'a*.

—middle fork, on reservation—*Ä'gi'äni p'a*.

elm (*Ulmus*)—*ta'ä'*.

Elm fork, Oklahoma—*Atäntai' p'a*.

El Paso Mexicans—*Pä'sūñko*.

emigrants—*hop*; cf. immigrants, *tsähop*, and travel, *ho*.

Emigrant road (Texas to California)—*Ho'an-t'a'ka'-i*.

end (noun)—*aka'ngya, pätsä't*.

endure, you—*o'ba-ikä'*.

enemy—*gyai'k'i*; cf. hate, *nyägyai'to*.

entrails—*äti, setä, bot*.

erect (adj.)—*taha'*.

escarpment—see bluff.

Essequeta—*Ė'sikwi'ta*.

evening—*da'mkoñ'ga, deko'mdo'legya*.

exterminate—see massacre.

eye—*dä*.

face—*dobä*.

fall from sky (verb)—*p'e'gyä*.

far below (deep)—*doñ'iga*.

Fast-bear—a Kiowa raider in 1871.

fat—*don'*.

feather—*ägo* (see *ä*).

Feather-head—*Tseñtä'nmo*.

female suffixes—*-mä, -tsä*.

fight—*gi'ägyä*.

finger—index finger, *mā'ngo'm*; see also arm, *māndä'*.

fire—*piä*.

five—*o'nto*.

flap of tipi—*kompä'ka*.

flat—*kope'dal, ka'-igihä'*.

Flathead (tribe)—*Ä'daltoñ-ka'-igihä'go*.

flint—*k'a'-iko'n*.

Flying-squirrel—*Cha-hon-de-ton*.

folded (said of feathers)—*tä'lä'*.

foliage—*ai'deñ*.

Fontaine qui Bouille creek, Colorado—*Toñtep p'a*.

food—*pi'äñgya*; cf. eat; food in stomach, *sa'dal*.

foolish—*ä'dalka-i*.

foot—*anso'*.

fork (of a stream)—*pähä'dal*; fork for eating, *gi'a-tso'n̄i*; see also branch, *po'to'*.

Fort Larned, Kansas—*Mänka-güädal-de P'a-gya Yä'pähe gi'ädal-de'e'*.

four—*yi'ä'gyä'*.

Fourth of July—*Tso'lai'*.

freeze—*do'gyäbo'n*.

freighters—*kotä'dalhop*.

Frizzle-head—*Ä'dalpepte*.

fruit—*-e, -i* (suffix).

fur—*pa*.

furnished with, having—*-sadal, -do, -dä* (suffix).

game (playing)—*a*.

Gap-in-the-woods—*Howi'a*.

George Washington—a Caddo chief in 1871.

German silver—*hän-kope'dal*; see also metal, *hä'n̄gya*.

Giraud creek (?), Texas—*To'ntep-e'dal p'a*.
 girl—*mä'ta'n*.
 gold—*ä'dalhân-gu'ädal*; see also metal, *hâ'ngya*.
 goose—*gañ, tsädal*.
 gorget—see necklace.
 Grand river, South Dakota—*K'adal p'a*.
 grass—*son*.
 Gray-eagle—an Apache delegate to Washington in 1872.
 great—*e'dal*.
 green—*sá'he*.
 grins, he—*ĩmto'nomo*.
 Grosventres — *Botk'i'ägo* (Algonquian); *Henoñ'ko* (Siouan).
 ground (noun)—see earth.
 grow—see sprout.
 gun—*hänze'pko*.
 gunpowder—*hâ'ñpaiñ*.
 gypsum—*de'no'te'li*.
 Gypsum creek, Oklahoma—*De'no'te'li p'a*.
 hair—*ädal*.
 Hall, Agent J. Lee—*K'o'dal-gu'ädal*.
 Hancock, General W. S.—*Pa'sotkyä'to'*.
 hard—*got, k'an*.
 hare-lip—*poli'äkya*.
 hat—*boho'n*.
 hate, I—*nyägyai'to*.
 have, I—*gyädo'*.
 hawk—*ä'ga'-i, songu'äto, tongu'ädal*.
 Haworth, Agent J. M.—*Se'npog-u'ädal*.
 head—*ä'daltem*.
 Heap-of-bears—*Se'tdaya'-ite*.
 heart—*ten*.
 hemorrhage, he had a—*sa'omhä'pä*.
 Herantsa—*Heno'ñko*.
 Hidatsa—*Heno'ñko*.
 hide (noun)—*ka'-i*.
 high—see long, erect.
 hill—*yä'daldä, k'op, ba'dlo'*.
 hog—*setse'yu*.
 Hog creek, on reservation—*Setse'yu p'a*.
 hole—*tä'däldä*.
 horn—*guñ*.
 horned toad—*se'hän*.
 Horne Frog (*sic*)—*Con-a-hen-ka*.
 horse—*tseñ, päbo, gobe*.
 Horse (society)—*Ká'itse'ñko*.
 Horse's Back—*Tä'yäkwop*.
 hot—*gyäsä'dal, sä'lä'ti*.
 house—*do'*.
 Hueco Tanks, Texas—*Tso-do'i-gyätä'dä'-de'e*.

hunt, I—*gyädo'nmo*; see *edo'nmo*.
 Hunt, Agent P. B.—*Ta'dalk'i'a*.
 ice—*de'ngyä*.
 idol—see amulet.
 immigrants—*tsä'hop*; see also travel, *ho*.
 Indians—*Gi'agu'ädalta'ga*.
 initiate (into *Kâ'itse'ñko*)—*ä'opañ, o'pän*.
 insect—*p'odal*.
 intestine—see entrails.
 iron or steel—*hâ'ngya*.
 Iron-shirt—(1) *A'päta'te*; (2) *Ba-zhe-ech*.
 Iron-shoe—*Häñdo'ti*.
 island—*ä'da'*.
 issue of rations (period)—*ko'ñaka'n*.
 Jicarilla—*K'op-tagu'i*.
 Kansas, Kansans—*T'o't'a'ka'-i-do'mbe*.
 Kansas (tribe), Kaw—*Ga'ñsa*.
 Karankawa or Carrizo—*Dohe'ñko*.
 kettle—*doä'to*.
 Kichai (tribe)—see *Do'gu'at*.
 Kichai hills, on reservation—*O'nhonoñ-yä'-daldä*.
 kick, I—*gyä'ango'p*.
 Kicking-bird—*T'ene'-ango'pte*.
 kill—*eho'tal*.
 Kiowa—*Gä'igwü*. The popular form occurs in a number of geographic designations in the west, among which are the following: *Colorado*—Kiowa, Elbert county; Kiowa creek, a tributary of South Platte river. *Indian Territory*—Kiowa, Choctaw Nation. *Kansas*—Kiowa, Barber county; Kiowa county; Kiowa creek, Comanche county, better known as Satanta's fork, a tributary of Cimarron river. *Nebraska*—Kiowa, Thayer county; Kiowa creek, Scott county, a Kiowa village site in 1815. *New Mexico*—Kiowa, Colfax county. *Oklahoma*—Kiowa creek, Kiowa Medicine-lodge creek, tributaries of North Canadian river. *Texas*—Kiowa creek. Kiowa Apache (tribe)—*Semät, Tagu'i*. Kiowa Medicine-lodge creek, Oklahoma—*K'a'do' p'a*.
 knife—*k'a*.
 Kwahadi Comanche—*Gwa'hale'go*.
 lake—*setso'*.
 lame—*toñp'o'dal*.
 lamentation—*ä'gyä*; cf. cry, *äa'lyi*.
 lance (noun)—*guñse'to*.
 large—*bi'än, edal*.
 Larned, Fort, Kansas—*Aikoñ P'a Yäpä-he'gya*.
 Las Animas river, Colorado—*Tso p'a*.

Las Moras creek, Texas—*T'añ-yä'daldä p'a*.

last (of a series)—*aka'ngya*.

lead (metal)—*hāñ-ze'bat* (see also metal, *hāñgya*).

lean (adjective)—*ta'dal*.

leave behind wrapped up, I—*gyäko'āa*.

leaves—see foliage.

Lebos creek, Oklahoma—*Aikoñ Tsen p'a*.

left-handed—*ka'bodal*.

leg—*toñti*.

leggin—*kati*.

lie down, I—*äk'a'* (see *k'a*).

like, I—*eoñ'ti*.

Lipan (tribe)—*Ā'-tagu'i*.

lips—see mouth.

little—*sän, t'an*.

Little Beaver creek, on reservation—*P'o P'a Sän*.

Little-robe—(1) *Ka'üsä'nte*. (2) A Cheyenne chief in 1874.

Little Washita river, on reservation—*O'nhono'ñ p'a*.

Little Wichita river, Texas—*Tsen p'a*.

Lone-chief—a Pawnee chief in 1870 (see Winters 1871-72, 1872-73).

Lone-wolf—*Gu'i-pä'go*.

long—*gi'āni, gyu'ñi, gyu'ñhä'te*.

Lyon, Fort, Colorado—*Tso'paiñ Do'*.

McIntosh, Fort, Texas—*P'a-e'dal-t'a'ka'-igya*.

Mackenzie, General R. S.—*Mā'ngom-he'ñte*.

Madison, William (or Matthewson)—*Se'npō-ze'dälbe*.

maggot—*iyu'gu'*.

make, to—*ām* (root).

male (suffix)—*-pa*.

man—*k'ĩñ'āhi, -k'ia, -k'i* (suffix).

Mandan (tribe)—*Do'ho'n*.

manifold (noun)—*sa'dalka'ñi*.

Martinez, Andres—*Ān'dali*.

massacre—*ä'oto'n*.

measles—*a'gat-ho'dal*.

measure (noun)—*on*.

meat—*gi*.

medicine—*da-i, dahä'*.

Medicine bluff, on reservation—*Tso'ka-dahä'*.

Medicine-bluff creek, on reservation—*Tso'kada'hä p'a*.

Medicine dance or Medicine lodge—see Sun dance.

Medicine-lodge creek, Kansas and Oklahoma—*Ā'yä'daldä p'a*.

mescal—see peyote.

Mescalero (tribe)—*Ē'sikwita*.

metal—*hā'ñgya*.

Mexicans—*Ā'-t'a'ka'-i, Do'ka'ñi-t'a'ka'-i, K'o'p-t'a'ka'-i, P'a-edal-t'a'ka'-i, Toñ-he'ñ-t'a'ka'-i, Tso'-t'a'ka'-i, Tso'ñ-t'a'-ka'-i*.

middle—*kopa'-iñgya*.

midwinter—*sä'-kop*.

migrate—*tep, ho*.

mile—*on*.

Minitari (tribe)—*Heno'ñko*.

Missouri (tribe)—*Mäsu'ärä*.

Missouri river—*Tso'sa' p'a*.

moccasin—*doti*.

money—*ā'dalhā'ñgya*.

month or moon—*p'a*.

morning—*gi'ñägya, ki'ädä*; cf. *dawn, gyäpa'-iñgya*.

mortar (of stone)—*tsodo'm*.

mountain—*k'op, yä'daldä*.

mourning, ceremonial—*do'a't*.

mouth—*bedal*.

move about, I,—*äto'yä*; they (inanimate) —, *gyäze'mä*.

Muchacho (personal name)—*Mo'tsätse'*.

mud—*tsen*.

Mule creek, Oklahoma—*Tädalkop p'a*.

musselshell (one variety)—*k'o'dali'ätoñ*.

mustache—*se'npō*.

Mustang creek (?), Texas—*K'a'-ikon p'a*.

Myers, Agent W. D.—*Maiz*.

mysterious—see medicine.

My-young-brother—*Pa-con-ta*.

name (noun)—*kā'ñgya*.

Navaho (tribe)—*Ā'bäho'ko, Kotse'nto*.

neck—*k'odal*; see also throat, *o'si*.

necklace—*k'o'dalpä*.

negro—*ko'ñkyäo'ñk'ia*.

nest, to build a—*äntsenku'ädal*.

New Mexicans, or New Mexico—*K'o'p-t'a'ka'-i(-do'mbe), Tso-t'a'ka'-i(-do'mbe)*.

Nez Percé (tribe)—*Ā'dalk'ato'igo*.

Nichols, Agent Lieutenant Maury—*Do'-guatalta'r'de*.

night—*gi'ñägya, gi'ñäto'gya, gi'ñ-kopa'-iñgya*.

Night, the—*He-pan-ni-gais*.

nine—*ga'se*.

noon—*ki'äsa'*.

North creek, Kansas—see Satanta creek, Kansas.

North Canadian river, Oklahoma—*P'o p'a*.

North fork of Red river, Oklahoma—*K'op Pe p'a*.

- nose—*mak'o'n*.
 nostril—*sen*.
 notched—*ak'a'*.
 now—*i'nhogo*.
 Nueces river, Texas—*Donä'i p'a*.
 Nuevo Leon, Mexico—*Ä'-t'a'ka'-i-do'mbe*.
 oak—*do'go't-ä*.
 Oak creek, reservation—*Ka'do'liä p'a*.
 ocean—*domo'ntoñ*.
 of (possessive)—*-de* (suffix).
 offspring—see child.
 old man—*e'dalk i'a, kyä'to'*.
 Omaha (tribe)—*O'moho'ñko*.
 Omaha dance—*O'homoñ-gu'än*.
 one—*pägo*.
 One-bear—*Set-pä'go*.
 one-sided—see sloping.
 One-who-is-surrendered, the—*A-ei-kenda*.
 orange—see plum, *älo'*.
 Osage (tribe)—*K'apä'to, Ä'hyäto*.
 otter—*apeñ*.
 Otter creek, on reservation—*P'o p'a*.
 owl—*mahi'ñ, sa'podal*.
 Pacer—an Apache chief, who died in 1875; the name is an American corruption and misconception of his Mexican name *Peso*, signifying “dollar” or “money,” a Spanish rendering of his proper Apache name *Dego*. He was a brother of Goñkoñ, better known as Apache John.
 pain (noun)—*kop*.
 paint, painted—*gyä'gu'atda, gu'ädaldä'*.
 Painted-lips—*Ti'pinävo'n*.
 Palo duro—*Ä'go'tä*.
 Palo-duro creek, in panhandle, Texas—*Ä'go'tä p'a*.
 partner—*tsä'*.
 Paseños—*Pä'sûñko*.
 Paso—see Pacer.
 pass (noun)—see canyon.
 past (adverb)—see after.
 Pawnee (tribe)—*Gu'igyä'ko*.
 Pawnee fork, Kansas—*Ä'ikoñ p'a*.
 peach—*pa'gi-älo'* (see plum, *älo'*).
 Pease river, Texas—*Tsä'to-yä'daldä Pe p'a*.
 pecan—*donä'i*.
 Pecos river, New Mexico—*P'a-e'dal sän*.
 Pedro—*Belo*.
 Pe'näteka Comanche—*Ä'-gyai'ko, Gy-a'i'ko*.
 peninsula—*pi'ho'*.
 people—*-k'i'ägo, -gyäko* (suffix).
Peso—see Pacer.
 pet (noun)—*-tseyu* (suffix).
 peyote (*Lophophora*)—*se'ñi*.
 picture—*guät(-gya)*.
 Pike's peak (?), Colorado—*Guadal k'op*.
 pimple—*a'gat*.
 pinto—see variegated.
 pipe—*sa'top*.
 plant—see *e'gu'*.
 Platte river (north and south), Nebraska—*K'o'dali'ätoñ p'a, Don p'a*.
 Pleiades—*Dä'-mäta'n(-ta)*.
 plum—*älo'*.
 pomme blanche (*Psoralea*)—*äzo'n*.
 pond—*setso'*.
 Pond creek, Wichita reservation—*Se'np'o-dal-e' p'a*.
 Ponka (tribe)—*Ä'daltoñ-ädalka'-igihä'go*.
 Poor-bear—*Gu'äñteka'na, Se't-ta'dal*.
 Poor-buffalo—*Pa'-ta'dal*.
 Post-oak creek, on reservation—see Oak creek.
 pot—*doä'to*.
 pouch—*bi'imkä'-i*.
 powder—see gunpowder.
 Powder river, Montana and Wyoming—*Hä'ñpaiñ p'a*.
 powerful—see terrible.
 prairie—*pägyä*.
 prairie-dog—*tsäto*.
 Prairie-dog (personal name)—*Ka-him-hi*.
 prickly—*señ*.
 prickly-pear (*Opuntia*)—*se'ñ-älo'*.
 principal (adjective)—see real.
 prong—see branch.
 Pueblo (tribes)—*Te'guä(-go)*.
 Purgatoire river, Colorado—*Tso p'a*.
 Quahada—see Kwahadi Comanche.
 quail (noun)—*peñ sän*; cf. turkey, *peñ*.
 Quanah Parker—*Gu'a'na*.
 Quapaw (tribe)—*Ä'läho'*.
 quiver (noun)—*sabiñ'a*.
 rabbit—*poläñ'yi*.
 race (noun, contest)—*tsä'nkia*.
 ragweed (*Ambrosia*)—*ä'sähe'*.
 rain—*sep*.
 Rainy mountain, on reservation—*Se'p-yä'-daldä'*.
 Rainy-mountain creek, on reservation—*Se'pyä'daldä p'a, Tsen p'a, Tsodo'm p'a*.
 Rate creek (?), Colorado—*Se'ñ-älo' p'a*.
 Rath, Charles—*Tsä'li Esä'n*.
 rattlesnake—*säne'hiñ*.
 Raven or Raven Soldiers—*Toñkoñ'ko*.
 real—*-hiñ* (suffix).
 red—*gu'ädal*.
 Red mountain (?), Colorado—*Guadal k'op*.

- Red river, of Texas and Indian Territory—*Pe p'a edal*.
 Red-deer creek, Texas—*Ko'ga'-i p'a*.
 Red-food—a chief of the Nokoni Comanche in 1874.
 Red hills, Oklahoma—*Sä'k'odal Gu'ädal-do'ha'*.
 Red-otter—*A'peñ-gu'ädal*.
 Ree, Arikara (tribe)—*K'a't'a*.
 Ree river, South Dakota—see Grand river.
 repeat a ceremony, to—*ä'däldä*.
 reptile—*p'odal*.
 rib (bone)—*gu'ätem* (see *gu'äton*).
 rice—*iyu'gu'e*.
 rind—see shell.
 Rio Grande—*P'a edal*.
 river—*p'a*.
 road—*ho'an*.
 robe, buffalo robe—*ka*.
 Rochester, Mount, Texas—*Da'-do'ha'*.
 rock (noun)—*tso*.
 Rocky mountains—No general name; different portions are called *Gä-i k'op*, *Iätä k'op*, *K'o'b-etä'*, etc.
 rope—*yaipo*.
 rub—see *somta*.
 rush, cat-tail (*Equisetum*)—*donpä*.
 Sabinas river, Nuevo Leon, Mexico—*Se'nä p'a*.
 Sabinas Hidalgo (or lower Salado) river, Nuevo Leon, Mexico—*Don-äi p'a*.
 sacred—see medicine.
 sacrifice—*päñgun* (noun); *gyäpä'amda'* (verb); see also *pägun*.
 saddle—*ta'gyä*.
 saddle blanket—*taka'-i*.
 Saddle mountain, on reservation—*Ta'-k'o'p*.
 Sailor (personal name)—*Setä*.
 Salado river, Nuevo Leon, Mexico—*Señ p'a*.
 Saline river (?), Kansas—*Ho'tgyäsi'm p'a*.
 salt—*a'täntai'*.
 Salt fork of Arkansas river, Oklahoma—*A'täntai' p'a*.
 Salt fork of Red river, Oklahoma—*Dä'-mäta'n-ä' p'a*.
 sand—*pe*.
 Sand creek, Colorado—*Toñhe'n p'a*.
 San Francisco creek, Oklahoma—*K'obä' p'a*.
 San Pedro river, Texas—see Devil river.
 San Saba river, Texas—*Tso p'a*.
 Santa Fé trail—*Sese p'a ho'an*.
 Santa Rosa mountains, Coahuila, Mexico—*Do'kañi k'op*.
 Sarsi (tribe)—*Pa'k'iägo*.
 sash (ribbon)—*yaipo*.
 Satanta creek, Kansas—*Sett'a'iñte T'a'-ka'-imai'mo e'paga'ni-de p'a*.
 Saturday—*Daki'a-sän*.
 Scalp dance—*Ä'dalda 'gu'än*.
 Scott, Capt. H. L., U. S. A.—*Häñtäk'i'a*.
 Scott, Mount, on reservation—*K'ob-e'tä'*.
 Scout creek, Texas—*Poho'n-ä p'a*.
 Sea-gull (personal name)—*T'ene'-ko'ñkya*.
 sell—see trade.
 Seminole (tribe)—*Ä'domko*.
 serrated—see notched.
 seven—*pänse'*.
 sharpen—*gyäpä'to*.
 Shawano, Shawnee (tribe)—*Sa'wäno*.
 sheep—*ga'bodäli*.
 sheep, wild—*ä'dalto'yi*.
 Sheep (a society)—*Ä'dalto'yui*.
 shell (of nut, etc)—*kañi*.
 Sheridan, Mount, on reservation—*K'o'b-o'täbo*.
 shield (noun)—*kyu'ñi*.
 Shield—*Ki'ñep*.
 shirt—*t'o'gyä*.
 shoe—*doti*.
 shoot—*deta'bo*; see *eta'ga*.
 short—*tse'*, *kontse'*.
 Shoshoni (tribe)—*so'ndo'ta*.
 shoulder—*kato'n*.
 shower—*bi'äso't*.
 sick, I am—*äho'dalda*.
 sickness—*hodal*.
 side (of house, etc)—see wall.
 Sierra Madre, Mexico—*K'o'b-e'tä'*.
 Signal mountain, on reservation—*K'op-tai'-de-do'-tse'dalte*.
 Sill, Fort, on reservation—*Tso'kada'hä'-gya*.
 silver—*a'dalhâ'ñ-t'a'iñ*; see metal, *há'ñ-gya*, and money, *ä'dalhâ'ñgya*.
 Silver-brooch—*Tä'säwi*.
 Silver-knife—*Hä'ñt'aiñk'a'*.
 similar—*pä'tsoga*.
 sit—*ä'ngya*.
 Sitting-bull—*Pa'-ä'ngya*.
 situated upon—*tse'dalte*.
 six—*mä'sä'*.
 skin—*kagya*, *ka'-i*.
 skull—see head.
 skunkberry—*t'ä'ñpe-ä'*.
 Sleeping-wolf—*Gu'i-k'a'te*.
 sleeve—*mänka*; cf. arm and finger.
 sloping (adjective)—*habä'*.
 smallpox—*tä'dalkop*.
 Smith, John—*Poho'me*.

- Smoky-hill river, Kansas—*Pe p'a*.
smooth—*t'añi*.
snake—*sä'ne'*, *p'odal*.
soldier—*yä'pähe'*, *so'le*.
solitary—*pägo*.
Son-of-the-Sun—*Pai'-tälyi'*.
song—*da'gya*.
sour—*a'tän*.
South Canadian river, of Oklahoma and Texas—*Gu'ädal p'a*.
spear—see lance.
split (adjective)—see spoiled.
spoiled—*p'o'dal (-ta)*.
spring (season)—*a'se'gya*.
spring (of water)—*to'ñtep*.
sprout—*ek'i'ädä*, *gyäk'i'ädä*, *gyäpa'ta*.
spy (verb)—*äko'ä*.
Staked plain, of Texas and New Mexico—*Päsä'ngyä*.
star—*dä*.
stay (verb)—see dwell.
steal—see *ä'semtse*.
steel—*há'ñgya*.
stingy—*sa'bä*.
stink (verb)—*gyäbo'nsi*.
Stinking creek, on reservation—*Zo'dältoñ p'a*.
Stinking-saddle—*Taka'-i-p'o'dal*.
stomach—*bot*.
stone—*tso*.
Stone-calf—a hostile Cheyenne chief in 1874-75.
stream (noun)—*p'a, ase'*.
strong—*got*; cf. hard.
Stumbling-bear—*Se't-ïmk'i'a*.
stupid—*ä'dalka'yu'm*; (see also foolish).
sugar—*penä*.
Sugar creek, on reservation—*Tsen p'a*.
Sugar creek (east fork of Rainy-mountain creek), on reservation—*Tsodo'm p'a*.
Cf. *Se'pyä'daldä p'a*.
Sugar creek, on Wichita reservation—*Penä p'a*.
Sulphur springs (?), Martin county, Texas—*Bon toñ*.
summer—*pai'gya*.
summit—*pi'äya*; cf. top.
sun—*pai*.
Sun-boy, or Sun's-son—*Pai'-tälyi'*; *Ä'dal-bea'hya*.
Sun dance—*K'a'do'*.
Sunday—*Daki'ada*.
sunrise—*pa'i-ba'da*.
surround, we—*gyätä'dä*.
swan—*tsä'dal-t'a'iñ*.
Swan—*Tsä'dal-t'a'iñ*.
Swan lake, on Wichita reservation—*Setso'*, *Se'np'odal-e' Setso'*.
sweat (noun)—*sä'daltep*.
sweat-house—*sä'dalgu'ät, bo'npä*.
Sweetwater creek, Texas—*Iyu'gu'a p'a*.
Swift-fox — a Kiowa Apache warrior order, according to Clark; unidentified, but not the *Kä'itse'ñko* or *Toñko'ñko* (see page 230).
tail—*ton*.
take out—*gyäku'atda*.
tall—*gi'äni*.
Tamaulipas, Mexico—*Ä'-t'a'ka'-i-do'mbe*.
tattoo—see picture.
Tatum, Agent Lawrie—*Dänpa'-iñgyat'a-i*.
Tawa'koni (tribe)—see *Do'gu'at*.
Tawa'koni Jim—principal chief of the confederated Wichita, Waco, and Tawa'koni tribes, and judge of the Indian court in 1888; still living.
ten—*ga'kiñ*.
Ten-bears—*Pä'riäse'amän*.
terrible—*ze'dälbe*.
Texas, southeast—*Ä'-t'a'ka'-i-do'mbe*. The name is applied also to Tamaulipas.
then, or there—*o'hyo*.
thigh—*pa'ki*.
this—*i'ñhoti*.
three—*päo*.
throat—*osi*; cf. *k'odal*, neck.
throat, I cut his—*gyäo'k'atemä* (see *ïmk'o'-daltä*).
thunder—*pa'sot*.
tie, I,—*gyäpä'-imo*; cf. initiate.
timber—*ä*.
tin—*hän-t'aiñ* (see also metal, *há'ñgya*).
tipi, house—*do'*.
tipi pole—*guntä*.
tomorrow—*kyähi'ñaga*.
Tonkawa (tribe)—*K'i'ñähi-pi'äko*.
tooth—*zoñ*.
top—(of mountain, etc) *pi'äya*; (end) *pätsä't*.
Top-of-the-mountain—*Doha'sän*.
tortoise—see turtle.
trachea—*osi*.
track (noun)—*an*.
trade, I,—*dega'ñta*.
trail—*ho'an*.
Traitor creek, Texas—see Sweetwater creek, Texas.
trap—*po, hän-po*.
trappers—*há'ñpoko*.
travel, I,—*äho'ä* (see *ho*).

- Travel song—*Gu'ada'gya*.
travois—*tse'guan* (see dog, *tse'nhi*).
tree—*ädo*, *pep*.
tree-tops—*ä'pätsä't*.
tripe—*abi'n* (?).
triumph (noun)—*ka'gyä* (see also *imka'-gyägya*).
turkey—*peñ*.
turtle—*k'a'nki'n*, *to'nak'a'*.
twin—*pä'da-i*.
two—*yi'a*.
Two-butte creek, Colorado—*Ä'zot p'a* (?).
Pa p'a (?).
udder—*azä'*.
uncommon—see abnormal.
United States—*T'o'-t'a'ka'-i-do'mbe*.
useless—see spoiled.
Ute (tribe)—*I'ätä'go*.
Uvalde canyon (?), Texas—*Dan-toñ*.
Valdez—*Pä'li*.
valley—*hi'ädal*.
variegated—*t'o'igu'ät*.
Viejo—*Bi'äko*.
vizer—*gañto'n*, *päbo*.
vomit (noun)—*zodal*.
Waco (tribe)—see *Do'guat*.
wailing (noun)—see lamentation.
wait! (imperative)—*hi'tugü'!*
Walking-bear—*Setmä'nte*.
wall—*k'aga*.
walnut—*poho'n-ä'*, *poho'n-e'*.
Walnut creek (upper) Kansas—*Tsodalhe'n-de p'a*.
Walsh, Mount, Oklahoma—*K'o'b-aka'n*.
Wanderer creek (?), Oklahoma—*Tso'-t'ai'n p'a*.
war-bonnet—*ätaha'-i*.
War-club (a society)—*T'änpe'ko*.
war expedition—*dam*.
warrior—*yä'pähe'*.
Washita river, Oklahoma—*Ä'guntä p'a*.
Washita river forks, Oklahoma—*Yi'a-p'a-da'ti*.
water—*toñ*.
water-lily (?)—*se'np'odal-e'*.
weasel—*sa'dälso'mte*.
web, of spider—*po*.
week—*koñtä'kia*.
West Cache creek, on reservation—*Gwa'-hale p'a*.
wheel (noun)—*kotä'dal*.
whet, I,—*gyäso'nmo* (see *somta*).
whetstone—*k'a-pä'ti*.
Whirlwind—principal chief of the Cheyenne in 1874.
whistle (noun)—*tso'dältem*.
Whitacre, Charles W. (or Whittaker)—*Tsáli*.
white—*t'aiñ*.
White river, Texas—*T'aiñ p'a*.
White, E. E., special agent—*T'aiñte*.
White-bear—*Set-t'ai'n-te*.
White-bird—*Sen-son-da-cat*.
White-deer creek (?), Texas—*T'ä'npeä'p'a*.
White-horn—*Ti'l-lakai'*.
White-horse—*Tseñt'ai'n-te*.
White-man—*T'a'ka'-itai'de*.
White-people—*Be'dalpa'go*.
White-shield—A Cheyenne chief in 1874.
White-wolf—A hostile Comanche chief in 1874.
Wichita (tribe)—*Do'gu'at*.
Wichita mountains, on reservation—*Do'-gu'at k'op*.
willow—*se'nä*.
wind (breeze)—*go'mgyä*.
windbreak—*do'ä*.
wing—*tsodal*.
winter—*sai*, *sai'gya*.
Wise, Fort, Colorado—*Tso'paiñ Do'*.
without (privative)—*-heñ* (in composition).
wolf—*gu'i*.
Wolf creek, Oklahoma—*Gu'i p'a*.
Wolf-hair—a debatable Kiowa warrior killed by Mexicans in 1835-36 (Scott); said by *Se't-t'a'n* to be properly *Do'-e'dalte*, q. v.
Wolf's-name—*İ'sänä'näka*.
Wolf's-sleeve—*Babi'pa'*.
woman—*mä'ny'i*.
Woman-heart—*Mäny'i-te'n*.
wonderful—*ze'dälbe*; see also medicine, *da'-i*.
worm—*p'odal*, *iyu'gu'*.
worn out (adjective)—*komse'*.
wrinkled—*aka'-i*.
write, I—*gyä'gu'ät'da'*.
writing—see picture.
year—see winter.
yellow—*gu'ak'o*.
Yellow-buffalo—*Pa'-gu'ak'o*.
Yellowstone river, Montana—*Tso'sa' p'a*.
yes—*ho*, *há* (jargon, *how!*).
yesterday—*ki'äde'dal*.
young man—*do'guä'tal*.
Zarah, Fort, Kansas—*Tsodalhe'n-de P'a'gya Yä'pähe'-k'u'dal-de'e*.

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of Texas, II," part of "The Great South," by
Edward King.

Tatum, Lawrie. (Mr Tatum was the
first agent appointed for the Kiowa and
associated tribes, 1869-1873. He is now
living (1897) at Springdale, Iowa, and
has kindly furnished much valuable
manuscript and photographic mate-
rial.)

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ADDITIONS AND CORRECTIONS

Gray-eagle.—Kiowa Apache (figure 58, page 247). The Apache delegates at Washington in March–April, 1898, do not know this name, and say the picture is intended for that of another member of the delegation of 1872, a Kiowa Apache young man, not a chief, named Ná-ishañ-déná, “Apache-man.”

Dävéko—(figure 60, page 250). The name seems to mean “Recognizes-enemies,” referring to one who can distinguish at a great distance the identity of an approaching hostile party.

Goñk'oñ—(Plate LXXIV). “Defends-his-tipi,” i. e., one who stands guard at his tipi and prevents a hostile entrance. The name is inherited from his grandfather. Goñk'oñ is the brother of Dego, alias Peso or Pacer, former principal chief of the Kiowa Apache. (See English-Kiowa glossary).

Ka-ati-wertz-ama-na—(figure 49, page 195). This name, as written on the photograph furnished by former agent Lawrie Tatum, seems to be a corrupted Comanche form, but neither the name nor the picture can be identified by the Indians to whom it has been submitted. He is described in the inscription as “a brave man, not afraid of any Indian.”

Ná-ishañ-déna—instead of *Ná-isha-déna*, for the native name of the Kiowa Apache (see page 245).

Parker's ranch—instead of Barker's ranch, page 270.

Dó-édalte—instead of *Tó-édalte*, page 270.

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